Charles University in Prague

Faculty of Social Sciences
Institute of Economic Studies

MASTER THESIS

Analyzing the integration of migrants in the Eurozone: lessons for the EU integration

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Declaration of Authorship

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature, and the thesis has not been used to obtain a different or the same degree.

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Prague, July 18, 2014

Signature

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Abstract

Since European Union enables free mobility between its Members States, certain EU countries have become attractive destinations because of the working conditions and/or employment opportunities. As a result, some EU nations have experienced the inflow of large amount of immigrants and disturbances on their labor markets.

With regard to this, the concept of Immigration Surplus that proposes that phenomenon of immigration can trigger a process of redistribution of wealth that could enhance the level of production and increase the national income can be applied for analyzing these processes. In addition, research literature suggests that deeper integration of immigrants into host countries can lead to higher levels of economic success. Thus, high levels of integration may lead to an increase in the Immigration Surplus of the host countries. This Master thesis deals with the specific aspects of immigration and the effects that the integration of immigrant groups may have in the national income during the years of 2007 to 2012. Through an appropriate analysis, this research attempts to provide a description of the immigration phenomenon in the EU, the consequences of it in the labor markets and the relation with the distinct integration policies implemented by the EU countries.

JEL Classification	J21, J23, J24, J31, J61, J71, J88
Keywords	Labor Force, Employment, Labor Productivity, Wage, Labor Costs, Immigration, Labor Immigration., Integration, Discrimination

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Acronyms

- Immigration surplus = **IS**

- Bayesian Model Averaging = **BMA**

- Labor market mobility = **LMM**
- Access to labor markets = **ALM**
- Access to general support = **AGS**
- Targeted support = **TS**
- Worker's rights = **WR**

- Family reunion = **FR**
- Eligibility family reunion = **EFR**
- Acq. Conditions family reunion = **CFR**
- Security status family reunion = **SFR**
- Rights associated family r. =**RFR**

- Education = **ED**
- Access to education = **AE**
- Targeting needs = **TN**
- New Opportunities = **NO**
- Intercultural education = **IE**

- Political participation = **PP**
- Electoral rights = **ER**
- Political liberties = **PL**
- Consultative bodies = **CB**
- Implementation policies = **IP**

- Long term residence = **LTR**
- Eligibility long term residence = **ELR**
- Acq. Conditions long term res. = **ALR**
- Security of status long term res. = **SLR**
- Associated rights long term res. = **RLR**

- Access to nationality = **AN**
- Eligibility nationality = **EN**
- Acq. Conditions nationality = **ACN**
- Security of status nationality = **SN**
- Dual nationality = **DN**

- Anti-discrimination = **AD**
- Definitions & concepts = **DC**
- Fields of application = **FA**
- Enforcement mechanisms = **EM**
- Equality policies = **EP**

- GDP growth rate = **GDP**
- Unemployment rate = **UR**
- Remittance outflow = **RO**
- Remittance inflow = **RI**

- Country of observation = **c**
- Year of observation = **t**

Master Thesis Proposal

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Notes: The proposal should be 2-3 pages long. Save it as "yoursurname_proposal.doc" and send it to mejstrik@fsv.cuni.cz, tomas.havranek@ies-prague.org, and zuzana.irsova@ies-prague.org. Subject of the e-mail must be: "JEM001 Proposal (Yoursurname)".

Proposed Topic:

Analyzing the integration of migrants in the Eurozone: lessons for the EU integration

Topic Characteristics:

The economic prosperity and the social and political stability made European Union a favorable destination for international migrants. As a result, many EU countries noted an increase in the numbers of foreign born and third-country nationals. Growing multiculturalism across the EU might provide each Member State with the opportunity to enhance economic growth and institutional integration.

However, despite the benefits stemming from the integration of immigrants, some of the EU countries still have certain factors that hinder this process. There is still no one single clear migration and integration strategy for the European Union and various Member States execute varying approach to the integration of the foreign born and third-country nationals.

This thesis aims to measure two things:

1. The economic benefits from immigration for certain EU Member States.
2. The immigrant integration effects and the relation with the economic benefits from immigration for certain EU member states.

The thesis will base on the concept of the Marshallian surplus that allows measuring the losses and gains resulting from the changes on the labor market caused by migration and the decrease in the price of labor. Also, this work will employ the methodology developed in Borjas (1994), Cahikova and Strielkowski (2013) that would allow to calculate the immigration surplus for the selected EU economies. In addition, it will draw from the works of Migration Policy Group and British Council (2010) (2013) who derived "Migrant Integration Policy Index" (MIPEX).

This thesis will calculate immigration surplus for the selected EU economies for the years 2007 to 2012. With the results obtained, it will run a model with respect to the seven main policy indicators used in the MIPEX in order to understand the relation between the immigration surplus and the migrant's integration.

The data will be obtained from the database provided by the Statistics Department of the European

Commission, the Organization for the Co-operation and Development and the World Bank. The data will be comprised of indicators such as the average wages, number of immigrants, the labor market mobility, the access to education, the access to long term residency permits, the access to nationality, the political participation and the anti-discrimination strategies.

This work aims to contribute to the existing literature by showing the links between migrants' integration, positive implications for the economy stemming from the immigration and discussing the welfare concepts of immigration.

Hypotheses:

1. Friendly immigration policies that promote integration of immigrants in host countries should have an impact in the national income through the expansion of the immigration surplus.
2. Encouraging integration through long term residence permits might increase the openness and adaptation of immigrants to new surroundings. As a consequence, the promotion of access to social, economic and politic participation will enhance the immigration surplus.
3. Deeper integration to labor markets should lead to higher levels of immigration surplus and thus to an enlargement of the IS.
4. Migration policies that contribute on granting the nationality to immigrants may impact the immigration surplus in a certain way. The coefficient of this relation should be significant but with uncertain sign due to diverse effect that this event can potentiate in the host economy.

Methodology:

1. Computation of immigration surplus:
   As we already mention it, this concept allows measuring the losses and gains resulting from the changes on the labor market caused by migration and the decrease in the price of labor. Thus, to compute this indicator is necessary to extract the following information for each selected country:
   A. The labor's share of national income for 2007 and 2012.
   B. The elasticity factor price for labor for 2007 and 2012.
   C. The fraction of the work force that is foreign born or third-country national for 2007 and 2012.

   Once the information has being obtained, it will proceed to replicate the methodology used by G. Borjas to measure the immigration surplus for each EU member state selected.

2. The seven main policy indicators will serve as a measure of the migrants' integration in each EU country and will be extracted from the Migrant Integration Policy Index published for the years 2007 and 2010.

3. OLS model:
   The thesis will use the OLS models to establish the links between the variables: immigration surplus in each member state and migrants' integration policy indicators. The models will be executed, with their respective information, for the years 2007 to 2012. Then the results will be will be interpreted in order to understand the economic implications of migration, the impact of the migrant policy indicators with respect to the immigration surplus and the effects of the 2009 financial crisis related with these two concepts.

Outline:

1. Introduction.
2. Theoretical background: Marshallian surplus, immigration surplus and MIPEX.
3. Hypothesis, research methodology and empirical model.
4. Posterior results.
5. Conclusions.
6. Appendix compilation.
7. References.

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Author **Supervisor**

1. Introduction

According to the Constitution of the European Union, the territory of the EU Member States is regarded as an "*area of freedom, security and justice without internal frontiers, and as an internal market where competition is free and undistorted*" (EU Commission, 2004). In order to reach this status, the EU Commission established internal and external objectives that should trace the path that each member country should follow to define and implement their policies.

Article I-3 of the Treaty Establishing a Constitution for Europe (2004) provides the following definition: "*The Union shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance*" (EU Commission, 2004). Through this legal framework and with these kinds of objectives the Union potentiated the market, enhanced economic growth and established itself as a world economic power.

Due to the provisions described above, several EU Member States have become attractive destinations for migrants (both EU nationals and nationals of the third countries). Even though the reasons why people decide to migrate to the EU and within the EU are diverse, the European Commission (2011) denoted in the document "Migrants in Europe. A statistical portrait of the first and second generation" that since the year 1995 migration for work issues and employment search have become the main reasons for moving from the home countries (EU Commission, 2011). Thus, there are mostly economic reasons why labor force decides to seek higher revenues and better working conditions in foreign labor markets.

Strielkowski (2012) affirms that immigrants choose host countries according to the ability to absorb the additional labor supply that they can provide. As a result, certain EU Member States have experienced the inflow of large amount of immigrants and disturbances in their labor markets. The migration policy makers, labor associations, trade unions and general society confront the constant dilemma of the consequences of allowing labor migrants to enter their countries and interact in their society. A common concern about this phenomenon and that might shape the policies implemented regard that immigrants come into a country without any contribution to society and that may only take advantage of the conditions of the labor market.

This Master thesis deals with the specific aspects of immigration that can describe the implications of this phenomenon and the effects of it in the national economies of the

member states in the EU. Is immigration beneficial for enhancing economic growth? Do locals benefit from the mobility of foreign workers or just the immigrants perceive the positive effects? Does this amount in labor supply just represent a threat for the employment in the long run? These research questions can shape the analysis and provide pattern for locating the research within the European space because of the economic importance of the region and the heavy inflow of migrants into it (e.g. the recent Lampedusa incident).

For practical purposes, the immigration indicators chosen for the analysis will be limited and will just include foreign-born or third country nationals, with a legal status, that reside in the countries described in the "Migrant Integration Policy Index".

This thesis also deals with the impact on migration, especially labor migration, on the economic and social development of the host countries (represented in this work by the EU Member States and other selected countries). Migration issues have represented a point of interest of numerous research papers and books; although certain inconsistencies can be observed in the results from study to study, most of them agree on the negligible or insignificant effect of it in the local economy.

2. Theoretical background

Immigration surplus and Migrant Integration Policy Index

When it comes to migration and its impact on wages, there are several sources that might be taken into account. For instance, using a meta-database that consists of 348 wage effects collected from 18 studies, Longhi – Nijkamp – Poot (2005) analyzed the general effect of migration in native wages. They concluded that from the percentage variation in wage of a native worker with respect to a 1 percentage point increase in the ratio of immigrant labor force over national workers is just about a decrease of 0.119%. The effect was lower in countries inside EU while in the United States is higher.

Furthermore, Lemos - Portes (2008) analyzed the impact of one of the largest migration inflows in the UK during the years 2004 to 2006. The empirical analysis found little hard evidence that reveals the entrance of these groups contributed to the fall in wages or raise the unemployment. In another related investigation, Lemos – Portes (2008) analyzed the impact of migration from the new EU Member States on native workers. The empirical study showed some results about the correlation between the immigration inflow and the unemployment rate. A one percentage point increase in the proportion of the migrant labor force (between the working age population) might decrease the unemployment rate in the EU Member States by 0.015 percentage points. Nonetheless, the estimated coefficient also resulted as insignificantly different from zero.

The findings that reveal the investigations, and is of critical importance, is defined that even when the effects of immigration to foreign labor markets are marginal or minimal, these might lead to positive results, contrary to the concerns of policy makers. As mentioned in "The impact of migration from the new European Union Member States on native workers" (Lemos – Portes, 2008) actual labor markets can be able by now to show proper flexibility and speed of adjustment in case of disturbances.

This Master thesis will employ the co-called "Immigration Surplus" designed by George Borjas (1994) that emerged with the purpose of describing the consequences of the labor mobility process through the effects on labor markets. This concept has been chosen for this research because it can concisely reflect the measure of the positive or negative effects of immigration at the aggregate level of national income. Even when the methodology used by Borjas could be a bit robust, it represents one of the few procedures that intend to measure such a complicated aspect as immigration.

Likewise, is intended to analyze the economic implications of the various levels of integration in the member states of the European Union in regard to the effects of labor immigration on the local economy. This aims to explain whether the benefits or damages caused, and expressed by the Immigration Surplus, can be enhanced or reduced with high levels of social and economic integration.

In a lack of a common immigration policy frame between Member States, the aspect of integration of immigrants present different scenarios among countries of the region. In some nations, immigrants might experience greater difficulties to interact, work and/or adapt than in others. Thus, the inability to coordinate efficient integration strategies can lead to a situation of inefficient allocation of resources by the public institutions (Trbola, 2011) and a limitation to the possible positive benefits raised by immigrants.

These barriers of integration can contemplate issues such as complications while entering the labor market, higher costs of migration and lower disposition of immigrants to receive lower wages because the cost of stay in the country is high.

The Research and Evaluation Group of DTI Associates and Levine A. (2004) prepared a collection of five research papers for the Bureau of International Labor Affairs and the United States Department of Labor. In these papers is described the role of immigrant integration in the labor force in regions such as North America and Europe. It is also addressed cases where the integration of foreign workers into the local labor force represents a way to enhance the market or to compensate a social issue that might harm the economy in the future (e.g. the aging condition of the European labor force).
In "Labour Market Integration of Immigrants in Canada – Existing Services and New Initiatives" (Ruddick, 2004) is described Canada's immigration program as an active measure to integrate refugees and immigrants to economy and society. Even when there were signs in the early 90's that showed an increase in the rate of low incomes, probably related to the foreign worker inflows, the second half of the 90's decade revealed an improvement in the economic growth. Initiatives such as foreign credential recognitions, language training, internships, bridging programs and others focused their efforts to help immigrants to access labor markets and thus contribute to the market and economy growth (Ruddick, 2004).

Differently from other countries with high immigration levels, the Unites States has no explicit immigrant integration policies or programs. In "The Economic Integration of Immigrants in the United States: A Review of the Literature" (Goździak – Martin, 2004), the authors explain that even when the country lacks of immigrant integration strategies, this process occurs within the civil and private spheres. "*Almost all*

immigrants to the United States are sponsored by family members or employers who take a principal role in ensuring their adaptation to the new country" (Goździak – Martin, 2004). In this way, the labor market has a peculiar characteristic and is so flexible that the immigrants could easily find opportunities to be employed and integrate at certain level to the society. Upward mobility between jobs and positions also characterizes the American labor market, thus the immigrants have more possibilities to increase their incomes. Certainly, this case serves as an example where integration is not properly in charge of a public institution but still denotes the benefits the can be enhanced with it; is important to remember that this is a rare characteristic of the labor market in the United States.

"Migration, Labor Markets, and Integration of Migrants: An Overview for Europe with a Comparison to the U.S." (Münz, 2004) details the aging issue in Europe. Longevity and low fertility rates characterize this population where domestic working populations seem to be eventually shrinking. Additionally, this condition also increases the demand of low skilled workers. "*Recruitment of migrants from third countries is increasingly appearing as the main way of responding to the growing demand for medium and high skilled labor. After 2010, many countries will have to develop pro-active migration policies to meet burgeoning demographic and economic needs*" (Münz – Fellow, 2004). In the short term the recruitment of immigrant labor force from East European countries will be able to compensate the aging issue, later the EU Member States will appeal to labor resources in third countries. Thus, if the EU intends to maintain economic growth in the area might need to deploy integration strategies that encourage migrants to work within the Member States by offering them sufficiently attractive conditions. These integration strategies can include certain selection parameters of immigrants that match with the complementarity condition depicted in the Immigration Surplus, thus, benefits from the migrant inflows can be achieved. "*The migrants most likely to help match shortages of labor and skills and with the best chances to integrate are probably those who are able to adapt to changing conditions, by virtue of their qualifications, experience and personal abilities*" (Münz, 2004).

To measure levels of integration in different countries will be used the "Migrant Integration Policy Index" (Niessen - Huddleston - Citron - Geddes - Jacobs, 2010). The MIPEX is a recent tool that allows measuring and comparing diverse levels of integration with regard to different migration policy areas such as labor market mobility, education and access to long term residence between others. With the data contained in this index, the impact of integration in the immigration surplus might be explained and then used to generate advices that might improve integration and thus enhance economic benefits for local economy.

2.1 Immigration Surplus

The increase in the migration flow of migrants and immigrants in the European Union have led to the fact that countries should confront a change in the composition of societies with different kinds and levels of education, skills and labor preferences between other important cultural factors. These heterogeneous societies have generated for several years the discussion about the economic implications and the benefits or damages that this kind of activity can generate in the welfare of the nationals and the nation's macroeconomic indicators.

It is mainly because of this characteristic of diversity that the complementarity between the labor force and capital can arise and bring benefits to the host economies where immigrants reside.

These benefits can be measured in monetary terms, for instance in the form or the so-called "immigration surplus" developed by George Borjas (1994).

In order to understand the concept of immigration surplus, we should settle the research in a host competitive economy with market clearing framework, without externalities and that allows the free movement of factors of production from one country to another so that the welfare and efficiency could increase. For practical purposes of this thesis, it will be ignored the negative effects that immigration might cause when the host country is facing a problem of structural unemployment.

This thesis will follow the same methodology implemented in "The Economic Benefits from Immigration" (Borjas, 1994) to compute the immigration surplus from the EU member states. Borjas (1994) establishes a production function with just two inputs; labor force and capital (see equation 2.1).

Equation 2.1 Production Function

$$Q = f(K, L)$$

- Capital (K)
- Labor (L)

Then, this labor force is segmented in native workers and immigrant workers.

Equation 2.2 Segmentation of labor force

$$L = N + M$$

- Native labor force (N)
- Immigrant labor force (M)

Additionally, it must be assumed all workers are perfectly substitutes between each other, capital and labor force supplies are perfectly inelastic and there are constant returns on scale. The price of each factor is equal to its individual marginal production, where r_n and w_n represent the price of each capital and labor unit respectively at the n time. Finally, the entire output of the production function is entirely distributed to the workers and the owners of the capital.

Once the assumptions of Borjas model have been set, is necessary to first describe the equilibrium before the arrival of the immigrant labor force. The capital and the native labor force produce certain Q_N amount of national income in the time *0*. Thus, it can be represented the production function for the time period 0 in the following way:

Equation 2.3 National income accruing to natives

$$Q_N = r_0 K + w_0 N$$

Since the capital supply is inelastic the total output of this closed economy is the area delimited by the marginal product labor line. Figure 2.1 shows the area (A,B,*N*,0) that represents the national output of the economy in the time period *0*.

Now it should be explain the changes in the equilibrium after the arrival of the immigrant labor force. Since it has been already assumed, the labor force supply is perfectly inelastic and all workers are perfect substitutes between each other, the entry of this group will result in a shift to the right of the labor supply curve.

Figure 2.2 shows the changes in the wage and employment levels after the entry of the foreign born and third-country nationals. The two scenarios (before and after the arrival of immigrants) can now be compared and in this way visualize the changes in national income, wage and employment. As a result of the shift, the level of wage will decrease from w_0 to w_1, this means the level of employment will increase from *N* to *L*.

Now the two scenarios can be compared and analyze the changes in national income, wage and employment. As a result of the shift, the national income will increase and now it will be represented by the area (A,C,L,0). The level of employment will increase from *N* to *L*. The level of wage will decrease[1] from w_0 to w_1 because part of the national income is now directly distributed to immigrants; this redistribution is represented by the area (D,C,L,N). The immigration surplus, that represents the gains

[1] A key assumption in Borjas theory lies on the perfect inelasticity of the labor supply curve. In the case of a perfect elastic demand curve, the entry of immigrants into the host economy won't cause any changes in the level of wages so this group would receive the full additional production while the natives would not benefit in any way from the phenomenon of migration. By using this example it can be shown the effect of the immigration surplus can just come up if wage levels decrease as a result of an increase in the labor supply.

(or losses) resulting from the changes on the labor market caused by migration, is delimited by the area (B,C,D).

The gains can be raised because the market wage matches the marginal productivity of the last unit of labor hired and the immigrants bring the possibility to increase the national income by more than the cost of their employment. Even when the natives face a fall in their wages and a decrease in their welfare, the negative effect is not as big as the increase in the income that the owners of the capital will experience.

Figure 2.1 Market equilibrium before the entrance of immigrants

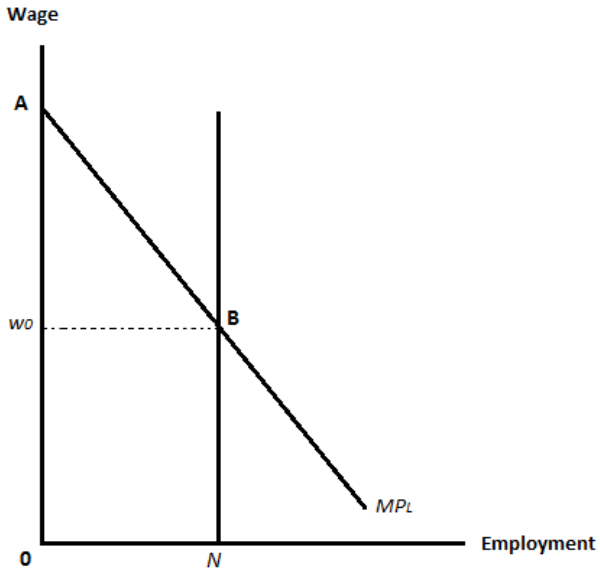
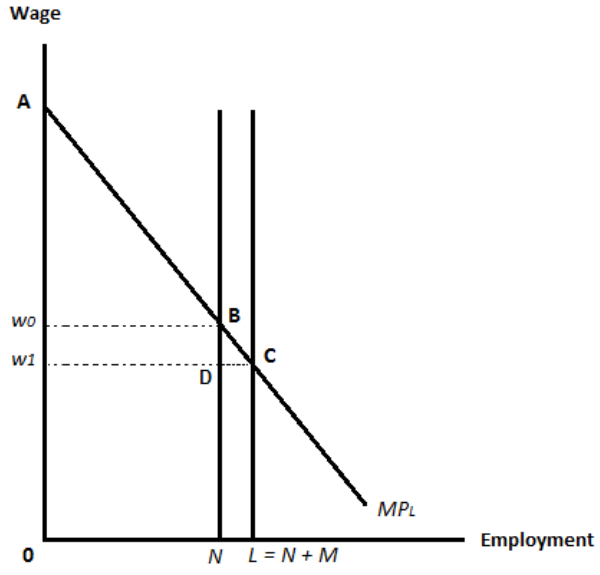


Figure 2.2 Market equilibrium after the entrance of immigrants



To measure the approximate value of immigration surplus from the time *0* to time 1 we can compute the value of its area in the figure 2.2. This area can be expressed as:

Equation 2.4 Immigration surplus

$$Immigration\ surplus = \frac{1}{2} * (w_0 - w_1) * M$$

Borjas reformulated the equation in order to express the immigration surplus as the fraction of the national income that was enhanced by the foreign and third-country nationals. To achieve this expression we must assume that $w_1 - w_0 \approx (\Delta w/\Delta L) * M$.

Equation 2.5 Immigration surplus as a fraction of national income

$$\frac{\Delta Q_N}{Q} = -\frac{1}{2} * \left(\frac{\Delta w}{\Delta L} * M\right)\frac{M}{Q}$$

$$\frac{\Delta Q_N}{Q} = -\frac{1}{2} * \frac{wL}{Q} * \left(\frac{\Delta w}{\Delta L}\frac{L}{w}\right) * \frac{M}{L} * \frac{M}{L}$$

$$\frac{\Delta Q_N}{Q} = -\frac{1}{2} sem^2$$

- Labor's share of national income (s).
- Labor's elasticity of factor price (e).
- Fraction of the labor force that is foreign born or third-country national (m).

2.1.1 Elasticity of factor price

The size of the immigration surplus will be conditioned by the elasticity factor price of labor and the increase in the national income will react proportionally to it. The greater the changes in wage due to an increase in the labor supply, the greater will be the resulting immigration surplus. Inversely, if the wages are not so sensitive to changes in the labor supply it will be hard to increase the income.

It is also important to remark that both production inputs (*L,K)* should have a complementary relation rather than to be perfect substitutes one of another; immigrant labor force must complement the capital owned by natives to achieve a positive reaction. If capital and labor complement each other means the elasticity of factor price is large (absolute value) and natives will experiment bigger benefits from the entry of immigrants. In the other scenario, if labor and capital are easy substitutes

one of another the migration surplus will be small and natives will hardly benefit from the immigrants.

2.1.2 Redistribution of wealth

Through the concept of immigration surplus is possible to discern one of the main ideas that shapes this research, the entry of migrants to an economy that offers them employment opportunities may result in economic benefits for the general economy.

Another key finding in Borjas' research is related to the redistribution of wealth. Even if the immigration surplus represents a small increase in the national income, the amount of wealth that is transferred from the native workforce to the owners of the capital occurs in a larger quantity.

Figure 2.2 showed the fraction of the total income that is directly transferred to the foreign born and third-country nationals (area (B,C,D)). It also showed the fraction of wealth that is transferred from the labor force to the capital owners. Area $(w_{0,}B, D, w_1)$ represents this redistribution of wealth.

Below is expressed this redistribution as a fraction of the total national income:

Equation 2.6 Wealth redistribution expressed as fraction of national income

$$\frac{Change\ in\ Native\ Labor\ Earnings}{Q} = sem\ (1 - m)$$

$$\frac{Change\ in\ Income\ of\ Capitalists}{Q} = -sem\ (1 - \frac{1}{2}\ m)$$

The enhancement in the national income and the redistribution of wealth open a range of possibilities for migration policy makers. The use of this model may generate new immigration strategies that stress on distributional topics instead of efficiency ones.

2.1.3 Limitations from the calculation of the Immigration Surplus

The Immigration Surplus faces various limitations due to the number of assumptions used to calculate it. In the following section will be presented some of the cases where the concept can be restricted:

a) Immigrants augment the stock of capital:

Let's suppose the case where the immigrant labor force entries the host country and each of these owns a certain amount of capital. After their arrival, the labor supply force will increase as well as the amount of capital used in the production function. Since the changes in the labor market had been compensated in some way by the new capital, the adjustments in wage won't be so sensitive and the resulting immigration surplus won't be as large as following Borjas assumption. The immigration benefits could be nullified if the capital increases in the same proportion than the increase of the labor force.

b) Correlation between the native's wage and immigrants 'share:

Borjas presumes that the existing correlation between the natives' wages and the immigrant share should not exhibit a small impact in the opportunity of foreigners to access the native earnings. This kind of correlation might serve as a measure of acceptance of the local labor market to the immigrants, however, if the owners of capital and employers are still interested to improve their production through lower labor costs, migrants will continue having access to this native earning no matter the level of correlation estimated.

c) Labor unions:

The role of unions could significantly alter the principles of the immigration surplus. With the entry of immigrants into the host economy, wages must be reduced in order to generate the wealth redistribution and an increase of national income. However, unions will hardly allow a fall in wages due to an increase in labor supply. If the mobility of the factors of production consents the new labor market conditions, the native workers must choose between accept the new salaries or quit their jobs. This scheme could lead to an increase in the unemployment rate and general discontent of nationals. Once the native population is not pleased with their labor market condition, they will demand changes in the immigration policies that can protect the native's welfare. Finally, the changes in the policies might restrict the creation of an immigration surplus in the host economy.

d) Workers are perfect substitutes one of another:

The assumption that all workers are perfect substitutes for each other alienates the model from the reality of the labor markets. In addition, it limits the potential positive economic effects of qualification, work experience and innate skills of each individual.

2.1.4 Variation in the marginal utility labor force

Even though the model is developed over the assumption of constant return on scale, is interesting to understand the possible effects of variations in marginal productivity because of immigrants.

The diversity and complementarity of factors of production (as mentioned previously) provides the opportunity to generate an increase in the returns on the aggregate even if the firm has constant return on scale. The different abilities between native worker and immigrant workers might enhance the skills of both groups through a "pick up" knowledge process in which the firms and owners of capital will benefit without paying for it.

It should be also considered that immigrants are economic agents that interact in the markets of goods and services, not only in the labor market. Thus, their stay in a foreign country should raise the demand for goods and thus shift the labor demand curve to the right. Figure 2.3 shows this shift.

Let's refer to these kinds of phenomenon as "external effects" just like Borjas did it.

To represent the "external effects" in the production function assume the production function is set in the following way:

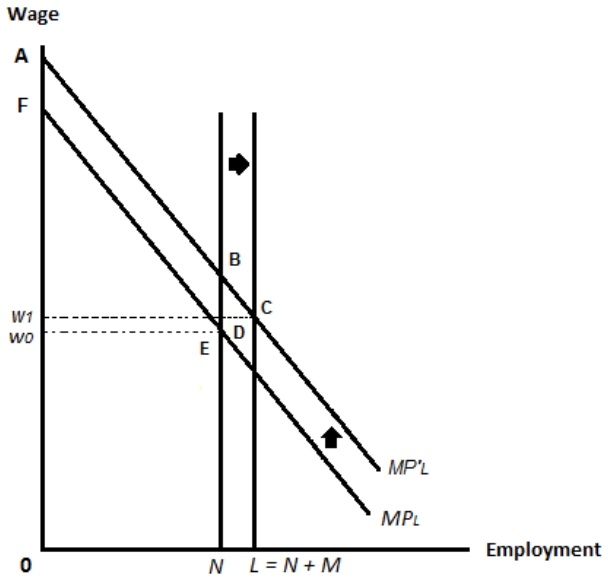
Equation 2.7 Production function with external effects

$$Q_F = f(K, L)Q_E^{\gamma}$$

- Representative firms output (Q_F)
- Capital (K)
- Labor (L)
- Aggregate output in economy (Q_E)
- Percentage increase in the marginal product of labor as a result of an increase of 1 percent in aggregate output (γ).

The shift of the labor marginal productivity curve to the right because of the external effects results in the increase of the national income. The area (B,C,D) represents the immigration surplus under external effects; meanwhile, the area (A,B,E,F) measures the impact of immigration in the total production of natives.

Figure 2.3 Equilibrium after the entrance of immigrants under external effects



The immigration surplus under external effects can be computed also as a fraction of the national income, equation 2.1.3 expresses this calculation:

Equation 2.8 Immigration surplus under external effects

$$\frac{\Delta Q_N}{Q} = \underbrace{-\frac{1}{2} sem^2}_{\text{Fraction of the national income distributed to immigrants. (B,C,D)}} + \underbrace{\frac{\gamma sm}{1-\gamma}(1 - sm)}_{\text{Change in the national income of natives due to external effects. (A,B,E,F)}}$$

The ideas about the external effects postulated by Borjas (1994) positive led to positive results and a very different posture towards immigration from the usual and negative one. Unfortunately there isn't still enough evidence to support these external effects.

2.1.5 Immigrant skill differentiator

In the same way it was addressed the issue of external effects, the differentiating skills will be added to the model to resemble the analysis of the effects of immigrations as close as possible to the reality.

In this section it will be introduced into the production function two kinds of workers.

Equation 2.9 Production Function with skill differentiator

$$Q = f(L_S, L_U)$$

- Skilled workers (L_S)
- Unskilled workers (L_U)

The role of complementarity between the factors of production will now assess the consequences if native/immigrant skilled workers go together with immigrant/native unskilled workers into the labor market. The immigration surplus will arise in the cases the incoming groups of migrants differ from the skill composition of the native labor population. In the case both groups share the same level of skills, the native community won't be benefit from the no nationals. Thus, the magnitude of the immigration surplus will also depend on how different is the immigrant labor force.

Equation 2.10 Immigration surplus as fraction of national income with skill differentiator

$$\frac{\Delta Q_N}{Q} = -\frac{1}{2}\frac{s_S e_{SS}(\beta - б)^2}{p_S^2(I - p_S)^2}(1 - m)^2 m^2$$

- Share of national incomer accruing to skilled labor force (s_S)
- Elasticity of factor price of skilled labor force (e_{SS})
- Fraction of skilled immigrant labor force (β)
- Fraction of skilled native labor force (б)

Skill differentiator in the workforce can be an important tool for immigration policy makers. Through this knowledge they can able to identify what type of immigrant population can maximize the immigration surplus and thus provide incentives to that specific group.

2.1.6 Immigration Surplus conclusions

The concepts presented in Borjas' paper reveal the potential benefits resulting from the phenomenon of migration and the implementation of appropriate migration policies. These concepts may serve as a breakeven point of paradigms about negative effects of immigrants into the host nation.

Understanding the complementary property of the factors of production, it can be structured a framework to identify the enhances of immigration and the type of immigrant population that has the potential to maximize the immigration surplus,

either through differentiation of skills, external effects or changes in labor market conditions.

The phenomenon of immigration can be interpreted as a process of redistribution of wealth that could enhance the level of production and increase the national income. It is possible that, during the process in which wages and labor supply find their new market equilibrium, certain labor sectors may experiment a decrease in welfare, however, in the long run the total population should benefit from immigration because of the expansion of the total demand.

2.2. Migrant Integration Policy Index (MIPEX)

Through an appropriate integration framework toward foreign born and third-country nationals, countries can structure a legal environment where these groups might contribute in a better way to the host country well-being. Factors such as access to employment, education, security and others can encourage the immigrants to interact with local society and thus contribute to the development of this.

MIPEX is an index that serves as measure of integration policies in more than thirty countries[2] of the world. Is also used as a reference guide to evaluate, compare and improve the legal immigrant's situation in the host countries.

The index contains 148 policy indicators that describe the opportunities a legal immigrant has to participate economically and politically in the host society. Through this analysis the index can detail if the foreign born or third-country nationals are treated with the same rights as the natives.

2.1.1 Composition of the index

MIPEX analyses seven policy areas to elaborate the index; labor market mobility, family reunion, education, political participation, long-term residence, access to nationality and anti-discrimination.

Then, these seven policy areas are divided into 35 policy indicators. Every policy indicator consists in a question related to a specific area that composes the MIPEX. The benchmark for every policy indicator identifies the highest European or international standard that guarantees the equal rights, responsibilities and

[2] Countries: Armenia, Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States of America.

opportunities for all the residents in a country (nationals, foreign born or third-country nationals). Thus, each of the questions must be answered using the following scheme:

a) **3 points** – The policy area is graded with the maximum of points because it meets the highest standards for equal treatments for all the population.
b) **2 points** – The policy area lies halfway compared to the highest standards.
c) **1 point** – The policy area is graded with the minimum of points because is the furthest from the highest standards. If a country does not have policies on a specific policy indicator the grade of 1 is given as default.

Next, within each of the seven policy areas, the scores are averaged together to give a four dimension score that examines the same aspect of the policy. Then, these four dimension scores are averaged together to compute the respective policy area scores for each of the seven policy areas per country. Finally, these are averaged together one last time which leads to the overall scores for each country. To develop a ranking table or compare policies between countries, the initial 1-3 scale is transformed into a 0-100 scale where 100% is the top score.

2.1.2 MIPEX developers

The research is in charge of the British Council and the Migration Policy Group. In the process of gathering the information participate 37 level organizations (non-governmental organizations, foundations, universities, and research institutes) as well as the international partners affiliated to MIPEX in the countries around the world[3].

In contrast to any index, the MIPEX is based on public laws, policies and researches conducted by independent academics and practitioners in migration, education and anti-discrimination laws that evaluate the condition of each policy indicator. Each of the scores is then peer-reviewed by a second expert in the field.

2.1.3 MIPEX action plan

MIPEX intends to show with the index to the participating countries how to create a more favorable legal environment immigrant. Any recommendation made by the organization should lead a plan to encourage the integration of non-national groups and a suggestion through which no-nationals may increase the economic development of the local population.

[3] International partners: http://www.mipex.eu/partners

Since migration policies are important factors that can influence the process of integration, the analysis made can be used as a starting point to evaluate, fix or improve the conditions of immigrant groups through mechanisms that benefit both immigrant groups and natives.

2.1.4 Description of main policy areas

a) Labor market mobility:

The policy indicator corresponding to this seeks to measure the possibilities that a legal immigrant can access the local labor markets with the same rights that a native worker.

The individual, whether foreign born or third-country national, should be able to apply to any job either in the public sector or the private sector since the first day of stay in the host country.

The complete labor mobility represents that employers recognize the abroad qualifications of the worker and the opportunity to access to the specific training or knowledge if the position requires it.

Once hired, the employee should enjoy the same benefits as wage, social security and compensations that any national would receive if he will be performing the same working activities. In the same way, the immigrant worker is also forced to face the same responsibilities as a native like the pay of taxes.

The country should be able to benefit from the specific skills of the immigrants and if it is applied an appropriate integration strategy for these groups.

b) Family reunion:

It is assumed that families that are successfully reunited have the socio-cultural stability to participate more actively in society. Thus, the policy indicators for "Family Reunion" used in the MIPEX evaluate the rights and responsibilities that a family has when they move from one country to another.

If the immigration process is not fraudulent or it represents a security threat for the host country, the migration dependence should give a rapid and positive resolution for the permission requested by the family entering the nation. Countries with a high level of integration and family reunion facilitate access to schools, jobs and social programs for family members.

c) Education:

Any child coming from a family of legal immigrants must have access to the education systems in the host country from the level of kindergarten up to university.

The policy indicators in the area of “Education” measure the viability that the children of immigrants receive the same education and social programs as any national with the same socio-economic background.

d) Political Participation:

Countries that have a high level of MIPEX in the area of "Political Participation" evaluates of the newcomers as well as nationals enjoy from the same civil liberties. These attributes bring the overall population the opportunity to participate in the democratic processes.

If legal immigrants are well integrated to the political system of the society, they should have the chance to vote in the local elections, have the same political rights, access to the public information and contribute to the political decisions.

e) Long Term Residence:

After some time of living under the legal framework in a foreign country, the immigrants should have the right to decide for themselves whether to permanently settle there. The “Long Term Residence” policy indicators elaborated by the MIPEX intend to explain the availability of foreigners to exercise this right.

This long term resident status provides the immigrants with a better stability and a more attractive working and studying profile for the employers or educations institutes.

f) Access to Nationality:

In the cases the migrant that has decided to settle down in a host country and also expect fully participation in the public life can exercise the right to request the nationality of the country. Several countries demand from the immigrants a certain period of time living inside the country, to have no recent criminal records and to pass basic national language test as well as citizenship courses. If the foreign born or third-country national accomplishes these requirements, he/she should be able to get the nationality. The “Access to Nationality” policy indicator expressed in the MIPEX evaluates the viability of the migrant to acquire this entitlement and the efficiency of the process.

g) Anti-Discrimination:

Immigrant groups are exposed within the host country to be victims of an act of racism. These events can be triggered by issues of race, religion or nationality and may occur in different circumstances such as work, housing, schools, public service institutions and social protection between others.

Victims of these illegal acts are empowered to present the case to the authorities and seek for justice to compensate the damage. The authorities is enforced to analyze the case, sanction the one who committed the fault and look the way to compensate the total damage to the victim.

MIPEX stresses on the importance of this kind of acts and how do they block the process of integration of immigrants. Thus, the "Anti-Discrimination" policy indicator evaluates the process through which the laws protect migrants against this and how do local authorities enforce to compensate the immigrant and sanction the actor.

2.1.5 MIPEX conclusions

The MIPEX, although is recent and uses a new methodology, represents one of the few existing tools that tries to measures the complex process of integration toward migrants. The results of integration expressed in The British Council Group and Migrant Policy Group's publications for 2010 and 2007 provide the reader with a concise and comprehensive status of migrants in various nations of the world. Also, it is possible to observe specifically the facilities or difficulties in each country and that will face by anyone intending to migrate to the territory.

This index represents a fundamental tool for this research that seeks to link the economic benefits provided by immigrants to the host nation with integration levels of these individuals into the local society. Subsequently, it will be presented the econometric models that contain the results of the MIPEX for each specific policy during 2007 and 2010. This information will be linked to the immigration surplus calculated for the selected countries in the selected years.

3. Hypothesis, research methodology and empirical model

The empirical part of this Master thesis focuses on two major aspects. The first is to analyze the potential benefits (or disadvantages) that immigrants can bring to the economic growth in a host country; as explained in chapter two, we will use the concept of "Immigration Surplus" (IS) developed by Borjas to refer to these effects. The second aspect attempts to explain the possible relationship between the indicators of social and economic integration of immigrants in a host nation and the immigration surplus.

This chapter will first describe the main hypotheses that give shape to the research and that will be intended to prove through an econometric analysis. Second, it will list the selected countries for the research and the defined time period during which the data was comprised. Later, the collection and computation of variables contained in the data base will be described in detail. Similarly, the Bayesian Model Averaging method is explained as a way to select the relevant variables that could explain the link between the IS and the integration of immigrants. Finally, the preliminary econometric base model is constructed in order to attempt to measure the correlation between the two theoretical concepts described in the previous chapter.

3.1 Hypotheses

The planning and implementation of migration policies usually generates discussions due to the social and economic implications of the inclusion of new individuals into a market. This inclusion of people and their degree of acceptance in the host country can lead to different results which are of great interest for this research.

Borjas (1994) suggests that national economies can obtain economic benefits with the incorporation of immigrant workers into its labor markets. To complement this idea, certain existent literature suggests that the level of integration of immigrants in a labor market and society is somehow related to the economic performance of these groups and the economic behavior of the host country (Zimmerman, 2007). Danzer and Ulku (2008) give additional support to this idea and affirm that deeper integration may lead to higher chances to achieve economic success and thus enhance the national income (Danzer - Ulku, 2008).

Thus, the idea of a possible enhancement of the national income through the inclusion of immigrant labor forces into host labor markets motivated the hypotheses expressed in this Master thesis.

It is also important to denote that the legal admission of these individuals to the labor market should represent to the public finances new contributors as well as new users with access to social services. Danzer and Ulku (2008) specify that an individual that acquires the nationality of the destination country might access to higher adaptability tools that can potentiate his value in the labor markets. So, the analysis of the nationality effect with respect to the Immigration Surplus also motivates the hypotheses expressed in this section.

The following premises intend to prove, through the econometric analysis, the existence of a link between the immigration surplus and the integration of immigrants. (These entire hypotheses were formulated considering just the thirty seven selected countries and for the years of 2007 to 2012).

1. Friendly immigration policies that promote integration of immigrants in host countries should have an impact in the national income though the expansion of the immigration surplus.
2. Encouraging integration through long term residence permits might increase the openness and adaptation of immigrants to new surroundings. As a consequence, the promotion of access to social, economic and politic participation will enhance the immigration surplus.
3. Deeper integration to labor markets should lead to higher levels of immigration surplus and thus to an enlargement of the IS.
4. Migration policies that contribute on granting the nationality to immigrants may impact the immigration surplus in a certain way. The coefficient of this relation should be significant but with uncertain sign due to diverse effect that this event can potentiate in the host economy.

Using these propositions, we should be able to express and measure the possible relation that exist between immigration surplus and integration of immigrants; then with the results of the analysis it will be possible to give further recommendations to migration policies in order to boost the economic growth.

Now that the hypotheses have been described, we will proceed to define the variables used to build the analysis.

3.2 Description of the variables

In this section of the chapter will be described with detail the variables used in the research. It is important to remark that some of the parameters comprised in the database, especially the ones used in the IS, are the result of own computations made according to the economic theory and the research papers of Borjas (1994) and Strielkowski (2012).

The countries used for the purposes of this research were selected according to the same thirty seven countries that the British Council and Migration Policy Group (MPG) used to measure the Migrant Integration Policy Index in their document (MIPEX, 2013). The selected countries are the following:

- Armenia*
- Australia*
- Austria
- Belgium
- Bulgaria*
- Canada
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Japan*
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Norway
- Poland
- Portugal
- Romania*
- Serbia*
- Slovakia
- Slovenia
- South Korea*
- Spain
- Sweden
- Switzerland
- Turkey*
- United Kingdom
- United States*

*Countries that join the MIPEX since 2010. Observations of integration index are just available for the period of 2010-2012.

The time period defined for the research is limited in the same way because of the scarce number of publications of the MIPEX. The Migrant Integration Policy Index has been published by the Migration Policy Group just three times; the publications correspond to the years 2004, 2007 and 2010. Unfortunately, the results of the MIPEX 2004 are not comparable with the results obtained in 2007 and 2010. Consequently, the time period covered in this research will be limited from 2007 to 2012.

Since the time observations of the MIPEX are very limited due to its recent creation, it is necessary to assume that countries will keep a constant level of immigrant integration in their parameters until the next index is published. Hence, the countries will depict the same level in the MIPEX indicators for the years 2007, 2008 and 2009.

Similarly, after the second publication of the MIPEX, countries will depict the same level in the MIPEX indicators for the years 2010, 2011 and 2012.

The description of variables used in the model will be divided into three sections; each one according to the theoretical concept they are related:

- Variables used to measure the Immigration Surplus.
- Variables used to measure integration of immigrants.
- Control variables.

3.2.1 Data description

The data comprised in this Master thesis corresponds to annual[4] indicators published by international organizations, public institutions and statistical service agencies. Now we will list the organisms in charge of the collection of this information:

- British Council.
- Cekos IN. Economic and legal consulting agency.
- European Commission.
- Institute of Development Policy and Management, School of Environment and Development (University of Manchester).
- Migration Policy Institute.
- National Statistical Service of the Republic of Armenia.
- Organization for Economic Cooperation and Development.
- Statistical Office of the Republic of Serbia.
- The Vienna Institute for International Economic Studies.
- The World Bank.

The data collected by these institutions serves as indicators of demographic characteristics of the population, conditions of a labor markets, average salaries, migrations inflows and immigrant policy indicators.

3.2.2 Variables used to measure the Immigration Surplus

As it was described in the previous chapter, Equation 2.5 depicts the computation of the immigration surplus as a fraction of the national income in the following way:

[4] The Migrant Integration Policy Index is the only report from the data base that is published with a periodicity of three years.

Equation 2.5 Immigration surplus as a fraction of national income

$$\frac{\Delta Q_N}{Q} = -\frac{1}{2} sem^2$$

- Labor's share of national income (s).
- Labor's elasticity of factor price (e).
- Fraction of the labor force that is foreign born or third-country national (m).

Labor's share of national income (s).

The OECD explains the labor's income share of the national income in the following way:

"Unit labour costs measure the average cost of labour per unit of output. They are calculated as the ratio of total labour costs to real output, or equivalently, as the ratio of average labour costs per hour to labour productivity (output per hour). As such, a unit labour cost represents a link between productivity and the cost of labour in producing output". (OECD Statistics, 2012)

Appendix A contains the complete information available of the labor's share of national income for the total economy. Most of this information was published by the Organization for Economic Co-operation and Development (OECD) in their complete databases available via OECD's iLibrary[5]. The information expressed for countries that doesn't belong to the OECD was obtained through research papers, public institutions and other agencies.

Labor's elasticity of factor price (e)

The labor's elasticity of factor price represents the percentage change in the wages as a consequence of a change of one percent in the size of the labor force. Thus, to measure this concept is necessary to execute the following equation for each selected country for its respective year:

Equation 3.1 Computation of the elasticity of factor price

$$e = \frac{\%\ change\ in\ total\ labor\ force}{\%\ change\ in\ wage}$$

The variation in the total labor force and wages are measured from year to year.

[5] OECD. Stat Extracts. Complete databases available via OECD's iLibrary. http://stats.oecd.org/

Appendix B contains the information available about the total labor force for the selected countries from 2006 to 2012. The information about the total labor force in each country was gathered from The World Bank Database with the exception for Serbia; the total labor force information for this country was collected from the Statistical Office of the Republic of Serbia. Appendix C shows the results from the computations of the year to year change in the total labor force for the time period of 2007 to 2012.

Appendix D depicts the published average annual wages for the selected countries from 2006 to 2012. The information about the average annual wages for each country was gathered from the OECD, Eurostat, statistical service agencies from certain countries. Appendix E shows the results of the computations from the year to year change in the average annual wages for the time period of 2007 to 2012.

Fraction of the labor force that is foreign born (*m*)

This concept used by Borjas to calculate the Immigration Surplus represents the percentage of the labor force that is composed by third nationals or foreign born workers under a legal status. Since there is no precise information available specifically for the immigrant labor force, this project will used instead the international migrant stock provided by The World Bank Database. This institution defines the international migrant stock in the following way:

"International migrant stock is the number of people born in a country other than that in which they live. It also includes refugees". (The World Bank, 2008) In other words, this is the proportion of foreign born, third national or refugees living in a country relative to the total population in the same territory.

Appendix F shows the International Migrant Stock for the selected countries.

Immigration Surplus (*IS*)

Now that the required information has been collected and it will apply the same methodology suggested by Borjas and Strielkowski, this investigation attempts to calculate the Immigration Surplus for the thirty-seven selected countries during the period 2007 to 2012.

Appendix G illustrates the results of the computations of the Immigration Surplus for the thirty seven countries during the selected time period of 2007 to 2012. As it can be seen, several of the IS's show as a result a negative percentage, this would mean that the entry of immigrants to the economies of the host countries possibly derived in a decrease in the national income, and thus, contradict the theory proposed by Borjas. On the other side, it is crucial to remember that during the same time period in

which the IS's have been calculated, the global financial crisis of 2008 emerged; consequently diverse imbalances occurred in the financial and labor markets between other kind of negative shocks. This event can justify that the results of this research are not entirely consistent with the economic theory of Borjas since the possible effects of economic growth expected with the movement of immigrant labor forces to a foreign labor market in a host country was probably overshadowed by the unflattering economic outlook due to financial bubbles, large public deficits or high unemployment rates that this thirty seven countries experimented during these years.

To express the amount of wealth that the Immigration Surpluses represent, Appendix H express the fraction of IS in current U.S. dollars for each year. These were calculated with the percentages of IS's computed in Appendix G and then multiplied by the sizes of each respective economy measured in current U.S. dollars.

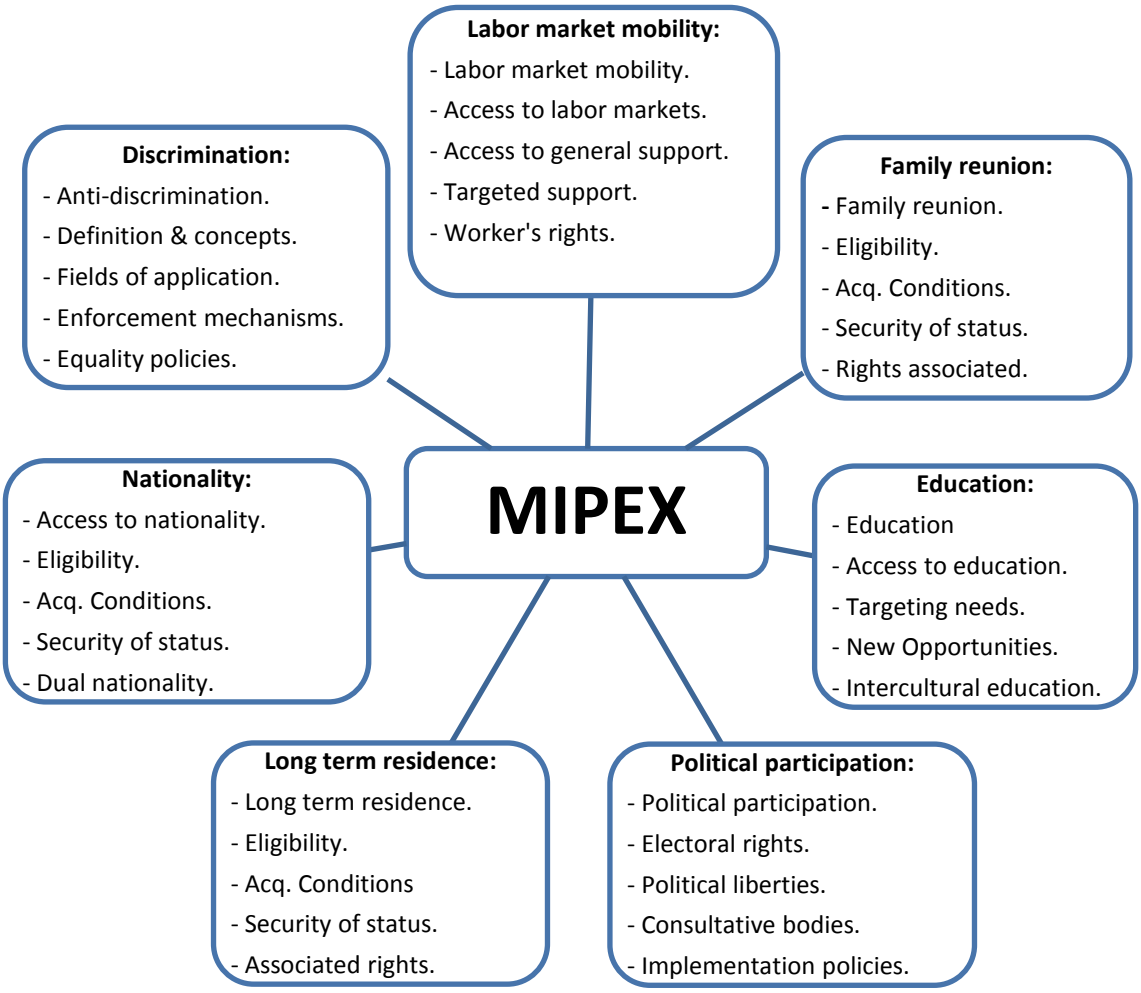
Now that the variables related to the IS have been explained, we will continue with the description of the variables used by the Migrant Integration Policy Index.

3.2.3 Variables used to measure the immigrant integration

As it was mentioned in the previous chapter, the Migrant Integration Policy Index is a tool developed by British Council and the Migration Policy Group with the purpose of measuring the results of the integration policies in thirty seven countries; these measurements are helpful to evaluate, compare and improve the legal immigrant's situation in host nations.

The model proposed in this project will use the policy indicators of the MIPEX covering the seven policy areas; labor market mobility, family reunion, education, political participation, long-term residence, access to nationality and anti-discrimination. Then, each of this seven policy indicators will be divided each into five sub-policy indicators (thirty five policy indicators in total). The following chart represents the full policy indicators used as variables in this research:

Chart 3.1MIPEX segmentation by policy area



Source: Migrant Integration Policy Index, British Council and Migration Policy Group. Available at www.mipex.eu

Now we will proceed to give a brief description of each of the policy indicators above mentioned.

- **Labor market mobility:** measures the level of integration that an immigrant may experience in the labor market of the host country.
- **Access to labor markets:** measures the access that immigrants have towards employment, whether in the private or public sector or as self-employed.

- **Access to general support:** measures the level of access of immigrants to public employment services, educational or vocational trainings.
- **Targeted support:** measures the level of facilitation and recognition of skills, professional and/or academic qualifications obtained outside the host country.
- **Worker's rights:** measures the access and integration of immigrant to a trade union. This indicator also evaluates the equal access to social security, equal working conditions and active policy information on rights of migrant workers.

- **Family reunion:** evaluates the feasibility that first-degree relatives of immigrant can live legally in the host country.
- **Eligibility:** measures the feasibility that dependent relatives in the ascending line or dependent adult children of the immigrant can live legally in the host country.
- **Acquisition conditions of family reunion:** measures the level of integration the family of the immigrant can experience with respect to of requirements (language, social, cultural, etc…) that the host economy request to permit the family reunion.
- **Security of status:** evaluates the duration validity of the permit granted to the family, the feasibility to reject or refuse the renovation of the permit and the legal guarantees of the family members.
- **Rights associated with family reunion:** evaluates the rights to autonomous residence permit for partners and children reaching the age of majority and the right to autonomous residence in case of widowhood, divorce, separation, death or physical or emotional violence. Also measures the access to education and training for adult family members.

- **Education:** measures the level of integration that an immigrant may experience in the education system of the host country.
- **Access to education:** evaluates the access to pre-primary, primary, secondary and higher education of an immigrant in a host country.
- **Targeting needs:** evaluates the access to language, training or vocational training that immigrants have in the host country.
- **New opportunities:** evaluates the provision option of learning the language and culture of immigrant pupil's to promote their integration.
- **Intercultural education:** evaluates the appreciation of the intercultural education and diversity. This indicator also grades the state of support of public information initiatives to promote cultural diversity.

- **Political participation:** evaluates the feasibility that immigrants can access to political participation in the host country.

- **Electoral rights:** grades the access of immigrants to vote in national, regional and local elections, as well as the right to stand for an election in a local level.
- **Political liberties:** evaluates the access of immigrant to join a political party, association or to create media (newspapers, radio, television, etc.).
- **Consultative bodies:** evaluates the access of immigrants to structural consultation and composition of national, regional and local consultative bodies.
- **Implementation policies:** measures the level of active policy of information by national, regional and local level. Also evaluates the public funding or support of immigrants' organizations at national, regional and local level.

- **Access to nationality:** evaluates the access of immigrants to get the nationality of the host country.
- **Eligibility:** grades the feasibility that dependent relatives, first, second and third generations as well as spouses can access the nationality of host country.
- **Acquisition conditions of nationality:** Evaluates the language, cultural and legal requirements and costs that immigrants face to acquire the nationality condition.
- **Security of status:** evaluates the grounds for refusing the status of nationality, the discretionary powers in refusal and the legal guarantees and redress in case of refusal.
- **Dual nationality:** evaluates the condition or requirement to renounce / lose foreign nationality upon naturalization for first generation. Also de dual nationality for second or third generation.

- **Anti-Discrimination:** evaluates the immigrants' anti-discrimination policies and campaigns in the host country.
- **Definitions and concepts:** evaluates the definition and concepts of immigrant discrimination depicted in the legal framework of a host country.
- **Fields of application:** evaluates the application of anti-discrimination policies in the employment, education, social security and public services fields.
- **Enforcement mechanisms:** grades the access of victims of discrimination acts to judicial civil procedures, criminal procedures and administrative procedures. Also evaluates the protection against victimization in employment, vocational training, education, services, and goods.
- **Equality policies:** evaluates the application of equality policies by the specialized agencies in the host countries through legal and informative activities.

The informative levels of all these policy indicators will be gathered from the reports of the MIPEX of 2007 and 2010. The MIPEX of 2007 measures these policy indicators for twenty nine countries; meanwhile, in the 2010 version other nine extra countries were added to the index. As a reminder of the assumption used in this project, the

countries will keep a constant level of immigrant integration in their parameters until the next index is published. Hence, the countries will depict the same level in the MIPEX indicators for the years 2007, 2008 and 2009. After the second publication of the MIPEX, countries will depict the same level in the MIPEX indicators for the years 2010, 2011 and 2012.

Appendix from I to V comprise the levels of integration for every policy indicator divided by country and period of time. The levels of integration of immigrants for the policy indicator of education are not available for the year 2007, thus, when entering this information to the econometric model will be considered as a null observation.

For any further explanation about the computation of the levels in each policy indicator, the reader can consult the second chapter of this research or directly in the website of the Migrant Integration Policy Index (www.mipex.eu).

3.2.4 Control variables

The level of the national income is prone to changes according to diverse economic, political, social factors, etc. Thus, this research finds appropriate to include control variables that may represent the performance of the national economy and consequently complement the information for the econometric analysis. This implies that the increase or decrease in the level of the immigration surplus is exposed to the same factors that can produce variations in this indicator. As mentioned in previous section, the research faces the issue of measuring the IS during a financial crisis stage, thus, with the next control variables should be able to illustrate and absorb part of these economic shocks.

The variables selected to represent these shocks on the economies of the countries are the following:

- Gross Domestic Product growth rate.
- Unemployment rate.
- Remittances outflows.
- Remittances inflows.

The variables of GDP growth rate and unemployment rate were chosen under the assumption that they can describe the economic performance of a country and the conditions of their labor market in a general aspect.

The inflow and outflow of remittances are considered as control variables under the assumption that these can describe, as a total, the amount of wealth that immigrants

sent to their native countries or the amount of wealth that nationals receive from immigrants working abroad; remittances are one of the few available indicators that can characterize the performance of immigrant workers in the host countries.

All of these variables had been collected from The World Bank Database.

Once it has been defined the variables that will be used in the preliminary base econometric model of this project, it should be also described the statistical and econometric methods employed to measure the relationship between the immigration surplus and policy indicators of migrant integration.

3.3 Bayesian Model Averaging

The project faced a peculiar dilemma when selecting the appropriate and relevant independent variables for the econometric model. Without a specific guidance from economic theory, the integration of immigrants into a host society can have a wide range of explanatory variables and indicators that can impact this phenomenon. Consequently, the definition of an econometric model given the uncertainty resulting from the large number of independent variables is complicated causing that the results obtained may be not effective and/or inconsistent.

It is important to denote that this paper will follow the same methodology used by Fernandez, Ley and Steel (2001) "Model uncertainty in cross-country growth regressions". Also, as a theoretical support, were used the documents of Eicher, Papageorgiou and Raftery (2011) "Default priors and predictive performance in Bayesian Model Averaging, within application to growth determinants" and Horvath (2011) "Research & development and long-term economic growth: A Bayesian model averaging analysis".

As mentioned in Fernandez, Ley and Steel (2001), *"A Bayesian framework allows us to deal with both model and parameter uncertainty in a straightforward and formal way"* (Fernandez - Ley - Steel, 2001). Since the MIPEX uses thirty five indicators to represent integration plus the four control variables included, it should be considered the existence of an extremely large set of possible models with subsets up to thirty nine regressors to include in the model.

To apply the Bayesian Model Averaging, it must be assumed that certain variables expressing immigrant's integration could be more important in explaining the increase or decrease of the immigration surplus. Thus, we won't select a specific subset of regressors according to the economic theory; instead of that, the Bayesian Model Averaging (BMA) will provide a subset with the whole inference averaged over

the models by using the precise posterior inclusion model probabilities as weights. (Fernandez - Ley - Steel, 2001).

It will be considered linear regression models where the IS for *n* countries, grouped in a vector *y*, is regressed on a α intercept and a number of explanatory variables chosen from a set of k variables in a matrix Z of dimensions $n \times k$. Therefore, it will be assumed a rank $(\tau_n : Z) = k + 1$, where τ_n is an *n* dimensional vector of 1's and define β as the full *k*-dimensional vector of regression coefficients. Following the same computation (Fernandez, Ley and Steel, 2001), and allowing for any subset of the variables included in Z to be incorporated in the model, the $(l = 2^k)$ possible combinations of subsets of regressors that can be generated result in more than five hundred billions of different models ($2^{39} = 549{,}755{,}813{,}888$). $M_j$denotes the model with specific group of regressors in Z_j. All this, leads to the following expression (Fernandez - Ley - Steel, 2001).

Equation 3.2 Model IS with integration of immigrants under uncertainty conditions

$$y = \alpha\tau_n + Z_j\beta_j + \sigma\varepsilon$$

Where $\beta_j \in R^{k_j}$ $(0 \leq k_j \leq k)$ represents the groups of relevant regression coefficients included and $\sigma \in R_+$ is a parameter of scale for the residuals. Each of the possible models excludes variables by assigning the value of zero to the corresponding β. It must be also assumed that ε is an *n*-dimensional normal distribution with zero mean and an identity covariance matrix.

According to FLS (2001), to structure a Bayesian framework is necessary to fulfill a sampling model with the prior distributions for the parameters in M_j, α, β_j and σ. Since we are modeling the IS under uncertainty conditions it must be recognized the selection of the distribution can have significant impact in the posterior model probabilities (Fernandez, Ley and Steel, 2001).

The idea to propose prior probabilities for this project results useless due to the inexistent information available about the relation between integration and the immigration surplus. Thus, Fernandez, Ley and Steel recommend to use improper non informative priors for the parameters that are common for all models in the cases where incorporating substantive prior information into the analysis results either impossible or provide irrelevant information. The priors proposed (FLS, 2001) for α and σ and the *g*-prior structure for β_j correspond to the product of:

Equation 3.3 Priors for parameters α and σ (Fernandez - Ley - Steel, 2011)

$$p\ (\alpha, \sigma)\alpha\sigma^{-1}$$

Assume also a common prior for σ across the different models, invariably conditioning on the full set of regressors.

Equation 3.4 *g prior*- structure for β_j (Fernandez - Ley - Steel, 2011)

$$p(\beta_j|\alpha, \sigma, M_j) = f_N^{k_j}(\beta_j|0, \sigma^2(gZ'_jZ_j)^{-1})$$

- $f_N^q(w|m, V)$- Density function of a q-dimensional Normal distribution on w with mean m and covariance matrix V.

Since the possibilities for the g-structure are very diverse, FLS (2011) conclude that the following structure leads to a reasonable result:

Equation 3.5 Optimal g-structure (Fernandez - Ley - Steel, 2011)

$$g = \frac{1}{\max\{n, k^2\}}$$

For the components of $\beta_j$that does not appear in $M_j$will be considered as ceros.

The sampling and prior for the selection of the regressors for the model $M_j$has been already described. Now is proper to also detail a prior distribution for the space of M for all the 2^k resulting models. This prior distribution for the space of M suggested in FLS (2001) has the following structure:

Equation 3.6 Prior distribution over the space of *M* for all the possible models

$$P(M_j) = p_j, \qquad j = 1, \dots, 2^k, \quad \text{with} \quad p_j > 0 \quad \text{and} \quad \sum_{j=1}^{2^k} p_j = 1$$

To suggest a prior probability of ½ for including a regressor is necessary to assume $p_j = 2^{-k}$, this will result in a uniform distribution on the model space.

Now the Bayesian will be able to model the uncertainty factor assuming that the posterior distribution of any quantity (Δ) is the average of the posterior distributions of that quantity under each of the models with weights given by the posterior model probabilities. FLS (2001)

Equation 3.7 Posterior model probabilities

$$P_{\Delta|y} = \sum_{j=1}^{2^k} P_{\Delta|y,M_j} P(M_j|y)$$

If the selection of Δ is appropriate, equation 3.6 provide the posterior distribution of the parameters such as the regression coefficients and makes possible to forecast future. The marginal posterior probability will be computed with the sum of the posterior probabilities of all models that contain the regressor. FLS (2001)

$P_{\Delta|y}$ that is regularly of standard form, is computed in the following way:

Equation 3.8 Computation of $P_{\Delta|y}$

$$P(M_j|y) = \frac{l_y(M_j)p_j}{\sum_{h=1}^{2^k} l_y(M_h)p_h}$$

- $l_y(M_j)$ marginal likelihood of the model M_j obtained in the following way:

Equation 3.9 Computation of $l_y(M_j)$

$$l_y(M_j) = \int p(y|\alpha, \beta_j, \sigma, M_j)\, p(\alpha, \sigma)\, p(\beta_j|\alpha, \sigma, M_j) d\alpha d\beta_j d\sigma$$

Using the previous equations can be measured the posterior inclusion probabilities (PIP) and model the uncertainty to choose the appropriate subset of parameters that can express the relation between the integration of migrants and immigration surplus without a theoretical framework that can be used as a guide[6].

Since k=39, the analytical computation of each PIP with the previous equations represents a very exhaustive process. Instead of it, we will execute the computation of the posterior inclusion probabilities using the statistical software R Studio and the code suggested by T. Havranek, R. Horvath, Z. Irsova and M. Rusnak in "Cross-country heterogeneity in intertemporal substitution" (2013).

Now that the Bayesian Model Averaging method employed in the research has been explained, this paper will continue to describe the econometric model that will be used to measure the relation between our dependent and relevant independent variables.

[6] For more information about the construction of the BMA posterior inclusion probabilities please consult Fernandez, Ley and Steel (2001), Eicher (2011) and Horvath (2011). These present a very clear analysis about the prior distributions when working a Bayesian Average Modeling.

3.1 Empirical model

In this section will be defined the structure of the preliminary base econometric model assumed to measure the relation between variables.

This project will use the ordinary least squares (OLS) model to establish the links between the variables: immigration surplus, migrant integration policy indicators and the economic control variables within groups and between groups of migrants in the thirty seven countries. Additionally, the data will be tested to detect issues of outliers, heteroscedasticity and multicollienarity. In case of the presence of these issues, the econometric adjustment methods will be executed.

The preliminary base model has the following structure:

Equation 3.9 Empirical model. The relation between the immigration surplus, the integration of immigrants and the economic control variables

$$IS_{c,t} = \alpha\tau_{c,t} + Z_j\beta_j + \sigma\varepsilon_{c,t}$$

Where $\alpha\tau_{c,t}$ is the intercept of each model and Z_j denotes the model with specific group of regressors. Is important to remember that β_j represents the groups of relevant regression coefficients included. Finally, $\sigma\varepsilon_{c,t}$ represent the residuals of each specific model.

The preliminary model can be expressed in the following alternative way. Each of the possible models excludes non relevant variables by assigning the value of zero to the corresponding β.

Equation 3.10 Extended version of empirical model. The relation between the immigration surplus, the integration of immigrants and the economic control variables

$$\begin{aligned} IS_{c,t} = \alpha\tau_{c,t} + Z_j\{&\beta_j LMM_{c,t} + \beta_j ALM_{c,t} + \beta_j AGS_{c,t} + \beta_j TS_{c,t} + \beta_j WR_{c,t} + \beta_j FR_{c,t} \\ &+ \beta_j EFR_{c,t} + \beta_j CFR_{c,t} + \beta_j SFR_{c,t} + \beta_j RFR_{c,t} + \beta_j ED_{c,t} + \beta_j TN_{c,t} \\ &+ \beta_j NO_{c,t} + \beta_j IE_{c,t} + \beta_j PP_{c,t} + \beta_j ER_{c,t} + \beta_j PL_{c,t} + \beta_j CB_{c,t} + \beta_j IP_{c,t} \\ &+ \beta_j LTR_{c,t} + \beta_j ELR_{c,t} + \beta_j ALR_{c,t} + \beta_j SLR_{c,t} + \beta_j RLR_{c,t} + \beta_j AN_{c,t} \\ &+ \beta_j EN_{c,t} + \beta_j ACN_{c,t} + \beta_j SN_{c,t} + \beta_j DN_{c,t} + \beta_j AD_{c,t} + \beta_j DC_{c,t} \\ &+ \beta_j FA_{c,t} + \beta_j EM_{c,t} + \beta_j EP_{c,t} + \beta_j GDP_{c,t} + \beta_j UR_{c,t} + \beta_j RO_{c,t} \\ &+ \beta_j RI_{c,t}\} + \sigma\varepsilon_{c,t} \end{aligned}$$

- Immigration surplus = **IS**

- Labor market mobility = **LMM**
- Access to labor markets = **ALM**
- Access to general support = **AGS**
- Targeted support = **TS**
- Worker's rights = **WR**

- Family reunion = **FR**
- Eligibility family reunion = **EFR**
- Acq. Conditions family reunion = **CFR**
- Security status family reunion = **SFR**
- Rights associated family r. =**RFR**

- Education = **ED**
- Access to education = **AE**
- Targeting needs = **TN**
- New Opportunities = **NO**
- Intercultural education = **IE**

- Political participation = **PP**
- Electoral rights = **ER**
- Political liberties = **PL**
- Consultative bodies = **CB**
- Implementation policies = **IP**

- Long term residence = **LTR**
- Eligibility long term residence = **ELR**
- Acq. Conditions long term res. = **ALR**
- Security of status long term res. = **SLR**
- Associated rights long term res. = **RLR**

- Access to nationality = **AN**
- Eligibility nationality = **EN**
- Acq. Conditions nationality = **ACN**
- Security of status nationality = **SN**
- Dual nationality = **DN**

- Anti-discrimination = **AD**
- Definitions & concepts = **DC**
- Fields of application = **FA**

- Enforcement mechanisms = **EM**
- Equality policies = **EP**

- GDP growth rate = **GDP**
- Unemployment rate = **UR**
- Remittance outflow = **RO**
- Remittance inflow = **RI**

- Country of observation = **c**
- Year of observation = **t**

It is important to remember that before the ordinary least squares model is computed, the preliminary base structure will be processed through the Bayesian Model Averaging mechanism that will provide the PIP of each independent variable; this will represent the probability that given regressor is included in the "correct model" and that has an impact on the dependent variable. Once the relevant variables have been identified through BMA, we will proceed to model the OLS with the immigration surplus as dependent variable and the relevant regressors as independent variables.

In the next chapter we will present the posterior results of the BMA, the OLS model and the tests to detect issues of outliers, heteroscedasticity and multicollienarity. Then it will be include the interpretation of the coefficients. The results should bring enough information to the give concrete recommendations to migration policy makers that can lead to positive effects in the economic development of the host country.

4. Results and discussion.

A common concern about planning and structuring migration policies lays in the discussion whether the migrants are beneficial for the economic growth of a nation, or whether these individuals come into a country without any contribution to society and may only take advantage of the conditions of the labor market. Also, the implementation of same policies may have diverse results in different countries.

In the pursuit of understanding the economic contributions of these immigrant groups, Oxford Economics and the Department of Employment and Learning (2009) define the following economics benefits and disadvantages of migration when they analyzed the phenomenon in Northern Ireland during the period of 2004 to 2009:

Benefits:

- Immigrant workers help to fill the job vacancies and skill gaps.
- Labor migration presents a possible solution to countries that experience aging problems in its labor market.
- Migrant workers become contributors to pensions and fill the gaps of an increasing retired population.
- Innovation.
- Migrant workers have been important for company survival because these workers are able to accept lower wages so companies should not be relocated.

Disadvantages:

- Raise unemployment rates.
- Labor immigration causes a decrease in wages in the short run.
- Increase in population.
- Due to the increase in the population, there is also an increase in the cost of the public services and the public expenditures.

Added to these findings, Tolstokorova (2009) discusses the paradox of whether to promote or not labor immigration. This paradox explains that the main incentive for migrants is unemployment and poverty in their native countries, hence, people should move to more attractive labor markets in order to secure the proper means of survival of their family at home. So, if migration is considered as a positive phenomenon, poverty and unemployment should be encouraged too.

As it can be seen, the resolution about the phenomenon of labor migration, and therefore the integration of immigrants, is still inconsistent. The literature presents different conclusions depending on the country and the time period. As a consequence, it has been triggered a huge controversy about the effects of immigrant workers in the economic performance of a country and how policy makers should approach to this topic.

This chapter will evaluate the effects of migrant integration policies in the thirty seven selected countries with respect to their observed immigration surplus during the time period of 2007 to 2012. First, we will present the posterior inclusion probabilities resulted from the Bayesian Model Averaging. Once the relevant independent variables have been identified with the BMA, we will proceed to execute tests to the database in order to determine if it presents problems such as outliers, heteroscedasticity and/or multicollinearity. After the tests, the final version of the Ordinary Least Squares model (OLS) will be implemented to measure the relation between the immigration surplus and the integration policies so we can determine if the integration of foreign labor force to these thirty seven countries had a positive effect in the economic growth or not.

4.1 Results of the Bayesian Model Averaging (BMA)

In this section will be presented the results obtained using the Bayesian Model Averaging. The data base introduced to this method includes as dependent variables one hundred and ninety five observations of the immigration surplus from thirty seven countries from 2007 to 2010. Similarly, the database contains thirty nine independent variables including the thirty five migrant integration policy indicators and the other four control variables for the same period of time; this represents a total of seven thousand six hundred five observations.

Table 4.1 presents the results obtained from the BMA using the statistical software R Studio and the code suggested by T. Havranek, R. Horvath, Z. Irsova and M. Rusnak in "Cross-country heterogeneity in intertemporal substitution" (2013).

Table 4.1 Posterior inclusion probabilities resulted from BMA

Regressor	Post. inclusion probability	Post. Mean	Post. Standard deviation	Conditional Post. Sig.
Security status long residence	0.734752390	1.32E-04	9.68E-05	1.0000000
Access to nationality	0.710572231	-1.74E-04	1.52E-04	0.0000000
Access to labor markets	0.677688159	7.76E-05	6.44E-05	1.0000000
Associated rights long term residence	0.417362932	-6.42E-05	8.33E-05	0.0000000

Rights associated to family reunion	0.219043634	-2.66E-05	5.62E-05	0.0000000
Dual nationality	0.195029570	1.62E-05	4.78E-05	0.8250191
Political liberties	0.153468881	-1.43E-05	3.73E-05	0.0000000
Acquisition conditions to nationality	0.111884051	-1.20E-05	3.84E-05	0.0059706
Fields of application of anti-discrimination	0.103793754	4.58E-06	1.53E-05	1.0000000
Eligibility of nationality	0.083641801	-6.88E-06	2.62E-05	0.0293628
Worker's rights	0.076404275	-7.70E-06	3.06E-05	0.0189778
Family reunion	0.074709420	-1.37E-05	5.68E-05	0.0201406
Long term residence	0.063871477	-1.24E-05	5.53E-05	0.0189900
Labor market mobility	0.053366916	-5.02E-06	4.58E-05	0.3101025
Anti-discrimination	0.046763906	3.26E-06	1.79E-05	0.9865038
Eligibility of family reunion	0.045631852	-3.64E-06	2.03E-05	0.0121464
Security status of nationality	0.041717252	-3.33E-06	2.18E-05	0.1582419
Education	0.037373882	-3.52E-06	2.19E-05	0.0025667
Acquisition conditions family reunion	0.033263373	3.32E-06	2.29E-05	0.9535227
New opportunities of education	0.028707349	-1.57E-06	1.15E-05	0.0032982
Unemployment rate	0.026052685	4.88E-04	3.80E-03	1.0000000
Remittances inflow	0.025162189	6.33E-15	5.12E-14	0.9770957
Targeted support to labor market	0.024840679	1.17E-06	1.02E-05	0.8472845
Access to general support	0.023067942	-1.04E-06	1.08E-05	0.1673260
Consultative bodies	0.021580604	-8.48E-07	7.67E-06	0.0056016
Enforcement mechanisms	0.021357592	1.26E-06	1.16E-05	0.9624094
Electoral rights	0.019530431	5.99E-07	6.13E-06	1.0000000
Remittance outflow	0.017517412	-1.37E-15	1.61E-14	0.1553779
Security status of family reunion	0.016965943	-7.69E-07	9.04E-06	0.0738221
Political participation	0.016951043	-9.48E-07	1.27E-05	0.1967293
Targeting needs	0.015570279	-4.84E-07	5.78E-06	0.0080958
Implementation policies	0.014041704	-1.23E-07	4.75E-06	0.4915226
Access to education	0.013852036	-4.26E-07	6.31E-06	0.0760766
Acquisition conditions of long term residence	0.013275000	-3.54E-07	5.48E-06	0.0294262
Equality policies	0.012375603	2.08E-07	4.98E-06	0.8525256
Eligibility of long term residence	0.012200500	-3.29E-07	5.16E-06	0.0291168
Definitions & concepts	0.011428199	2.57E-07	5.49E-06	0.8689852
Intercultural education	0.010839769	-1.48E-07	5.34E-06	0.4785560
GDP growth rate	0.008564292	-6.22E-05	2.60E-03	0.1856141

Source: Own computations

The posterior inclusion probabilities presented in the previous table express the probability that given regressor is included in the "correct model" and that has an impact on the dependent variable. As in Zeugner (2011) and for practical purposes of

the analysis, we will just consider as "relevant" to those independent variables whit a PIP higher than 50 percent. We can observe that only the independent variables "Security Status of Long Residence", "Access to Labor Markets" and "Access to Nationality" have a PIP above the established parameter and that probably these should be the ones included in the model.

Once we have obtained the posterior inclusion probabilities and identified the relevant variables that can measure the relation between the Immigration Surplus and the integration of immigrants, we can infer that the base model of our project will have the following structure:

Equation 4.1 Empirical model. The relation between the immigration surplus and the migrant policy indicators

$$IS_{c,t} = \alpha\tau_{c,t} + Z_j\{\beta_j ALM_{c,t} + \beta_j SLR_{c,t} + \beta_j AN_{c,t}\} + \sigma\varepsilon_{c,t}$$

- Immigration surplus = **IS**
- Access to labor markets = **ALM**
- Security of status long term residence = **SLR**
- Access to nationality = **AN**
- Residuals = $\boldsymbol{\sigma} \in$

Following the previous model, regression 4.1 depicts the estimated coefficients to describe the relation between the immigration surplus and the independent variables.

According to this first model, the integration of immigrants through the "Security Status of Long Residence" and the "Access to Labor Markets" had a positive impact in the Immigration Surplus of the selected countries during 2007 to 2012. Meanwhile, the integration of immigrants through the "Access to Nationality" had a negative impact in the Immigration Surplus during the same period of time.

Regression 4.1

Model:

IS = SLR + ALM + AN + $\varepsilon_{c,t}$

Residuals:

Min	1Q	Median	3Q	Max
-0.075858	-0.001048	0.000802	0.003062	0.029817

Coefficients:

	Estimate	Standard error	T - value	Pr (>|t|)	
(Intercept)	-5.39e-03	2.31e-03	-2.328	0.020962	*
SLR	1.08e-04	4.12e-05	2.613	0.009696	**
ALM	6.01e-05	2.45e-05	2.450	0.015190	*
AN	-1.43e-04	3.76e-05	-3.804	0.000192	***

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.008945 on 191 degrees of freedom
Multiple R-squared: 0.09516, **Adjusted R-squared:** 0.08095
F-statistic: 6.696 on 3 and 191 DF, **p-value:** 0.0002547

Now we will proceed to execute tests to the database in order to determine if it presents problems such as outliers, heteroscedasticity and/or multicollinearity.

4.2 Detecting influential observations

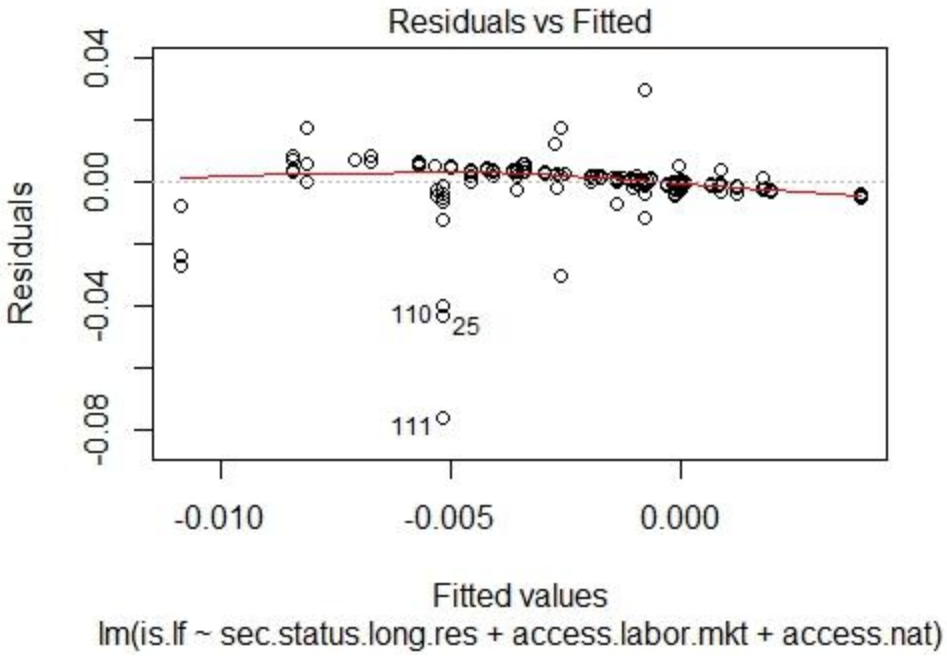
In this section we will execute the tests to identify possible influential observations or outliers in our data base.

Douglas Hawkins affirms that an outlier is considered an observation in a data base which can deviate so much from the other observations and may arouse suspicions that it was the result of a different mechanism or event (Hawkins, 1980).

The dependent variable's value of these outlier observations can be identified as unusual because of its residual and leverage. An observation with large residual may indicate a data entry error or other problem. The leverage measures how far an independent variable deviates from the mean; this can also indicate a possible error. It is important to identify the outliers because residuals and leverage can substantially influence and change the estimated coefficients of our regression; removing these unusual observations results in a different conclusion in the analysis (O'Halloran, 2005).

Plotting the residuals of the observations is possible to notice if the data base contains possible outliers. Figure 4.1 depicts the residuals of the first model.

Figure 4.1 Fitted values of empirical model and the residuals.



It is possible to observe that certain observations present large residuals. In this case, observations number 25, 110 and 111 can certainly represent data entry error or other problem that can influence the estimated coefficients in the first model. (Appendix W details the correspondent number of observation assigned to each country during a specific year).

To measure the influence of these or other possible observations, we can proceed to use the Cook's Distance, and thus identify the outliers (O'Halloran, 2005). *"Cook's distance measures the effect of deleting a given observation"* (Cook, 1977).

Equation 4.2 Cook's Distance for identifying influential observations

$$D_i = \sum_{j=1}^{n} \frac{(\hat{y}_{j(i)} - \hat{y}_j)^2}{p\hat{\sigma}^2}$$

- $\hat{y}_{j(i)}$ = Estimated mean of *y* at observation *j* in a model which observation *i* has been omitted.
- $\hat{y}_j$ = Estimated mean from the full regression model for the observation *j*.
- p = Number of regression coefficients.
- $\hat{\sigma}^2$ = Estimated variance including all the observations.

For more information about the computation of Cook's distance or the process to identify the influential observations, please consult "Model Checking" (2005) by Sharyn O'Halloran; there is a detailed explanation about the topic. The statistical software R Studio was used to calculate the Cook's distance for each observation and then identify the influential observations. Table 4.2 comprises the influential observation contained and that should be removed from the data base.

Table 4.2 Influential observations

Country	Year	IS	ALM	SLR	AN	d1	r
Canada	2007	-0.01042265	90	50	74	0.04685984	-2.730374
Canada	2008	-0.01735571	90	50	74	0.16314710	-5.094614
Canada	2010	-0.04844829	90	50	74	0.14562250	-4.897337
Canada	2011	-0.01120869	90	50	74	0.05651216	-2.998421
Ireland	2010	0.00957786	40	29	58	0.03063823	2.011176
Latvia	2010	-0.03296203	30	29	15	0.06722382	-3.432660
Latvia	2011	0.01470800	30	29	15	0.02185124	1.957074
Luxembourg	2008	-0.04485016	20	36	34	0.09212326	-4.477297
Luxembourg	2009	-0.08102210	20	36	34	0.33658589	-8.558136
Luxembourg	2011	-0.03488760	20	36	74	0.10368986	-2.756167
Luxembourg	2012	-0.03804210	20	36	74	0.13272955	-3.118324
Switzerland	2007	0.02903360	60	57	36	0.02943199	-2.708015

It is proper to rerun the model, but now without the influential observations. Regression 4.2 expresses the estimated coefficients of it.

The model shows that the estimated coefficients "ALM" and "AN" are still significant but "SLR" now is not. The "Access to Labor Markets" still presents a positive impact in the Immigration Surplus. Similarly and the integration policy indicator of "Access to Nationality" has a negative impact in the Immigration Surplus.

Regression 4.2

Model:

IS = SLR + ALM + AN + $\varepsilon_{c,t}$

Residuals:

Min	1Q	Median	3Q	Max
-0.0146468	-0.0004718	0.0003167	0.0013683	0.0099498

Coefficients:

	Estimate	Standard error	T - value	Pr (>|t|)	
(Intercept)	-6.283e-04	7.043e-04	-0.892	0.3735	
SLR	1.605e-05	1.253e-05	1.281	0.2017	
ALM	1.892e-05	7.370e-06	2.567	0.0111	*
AN	-5.366e-05	1.176e-05	-4.561	9.42e-06	***

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.002598 on 179 degrees of freedom
Multiple R-squared: 0.1111, **Adjusted R-squared:** 0.09623
F-statistic: 7.459 on 3 and 179 DF, **p-value:** 9.825e-05

Once the influential observations have been deleted, we will proceed to execute the test to determine the presence of multicollinearity.

4.3 Detecting multicollinearity

"Multicollinearity can be viewed as an interdependency condition that can exist quite apart from the nature or the even existence of, dependence between the independent variable and the dependent variable" (Farrar, Donald and Robert, 1967). In other words, represents a statistic issue where the correlations between the independent variable are strong and may influence the estimated coefficients.

First, we will express the correlation matrix of our dependent and independent variables to analyze the possible existence of multicollinearity. Table 4.3 shows the correlation matrix mentioned before.

Table 4.3 Correlation Matrix

Regressor	IS	ALM	AN
IS	1	0.0798241	-0.2561220
ALM	0.07982410	1	0.38496990
AN	-0.25612200	0.3849699	1

The correlation matrix didn't show a problematic level of correlation between the independent variables, thus, we can infer that the data doesn't have multicollinearity issues.

To ensure the null existence of multicollinearity, it will be executed a second test using the Variance Inflation Factor.

According to Thompson (2005), there is no definition of "high" Variance Inflation Factor that can indicate precisely the existence of multicollinearity, but values in the range of 5 to 10 are commonly used to express the presence of this issue.

The hypotheses used to test the presence of multicollinearity are the following:

Equation 4.3 Hypotheses to test the presence of multicollinearity using VIF

$$\boldsymbol{H_0}:: VIF_J < 5$$

$$\boldsymbol{H_1}:: VIF_J > 5$$

Equation 4.4 Variance Inflation Factor

$$VIF_j = \frac{1}{1 - R_j^2}$$

R Studio was used again to calculate the Variance Inflation Factor for each observation and then make a new test to detect multicollinearity. Table 4.4 expresses the result of these computations.

Table 4.4 Variance Inflation Factor

Regressor	VIF
ALM	1.191692
AN	1.384834

Thus, with the VIF values presented in Table 4.4, we can't reject our null hypothesis and then infer that the data base does not present multicollinearity problems.

Once the correlation matrix and the VIF test had been executed, we can proceed to analyze the possible existence of heteroscedasticity.

4.4 Detecting heteroscedasticity

Greene defines heteroscedasticity as: *"Regression disturbances whose variances are not constant across observations"* (Greene, 2002).

In the presence of heteroscedasticity in the data, the statistical tests of significance can be invalidated because the errors of the model are correlated and not normally distributed. As a consequence, our estimators don't have the lowest possible variance so they can't be considered as Best Linear Unbiased Estimators (Greene, 2002).

Figures 4.2 and 4.3 present the behavior of the errors compared with the observed Immigration Surpluses and the fitted values of the model respectively. Is hard to determine just with the graphical representations of the residuals if the data involves heteroscedastic disturbances; this is because the project deals with a short number of observations due to the limited publications of the Migration Policy Index.

Figure 4.2 Immigration Surplus observations and the residuals of the empirical model

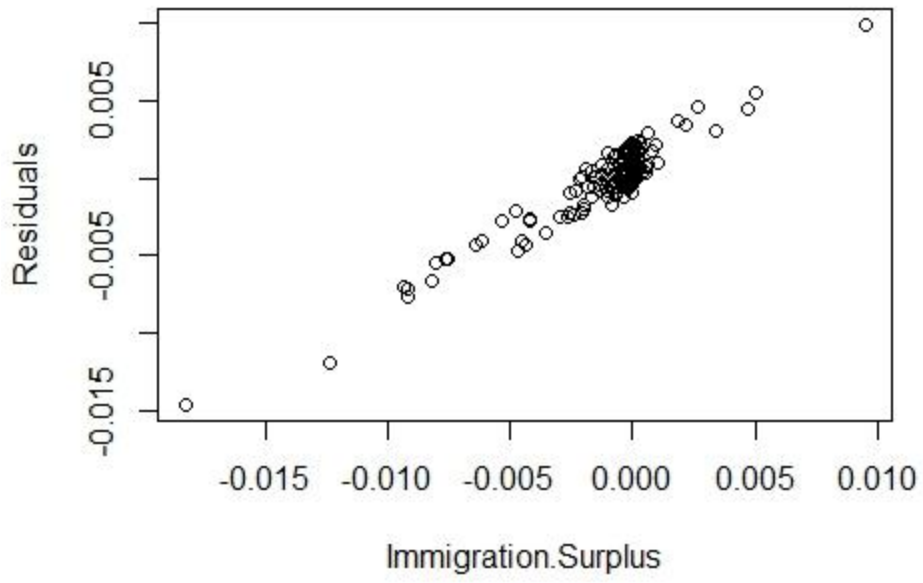
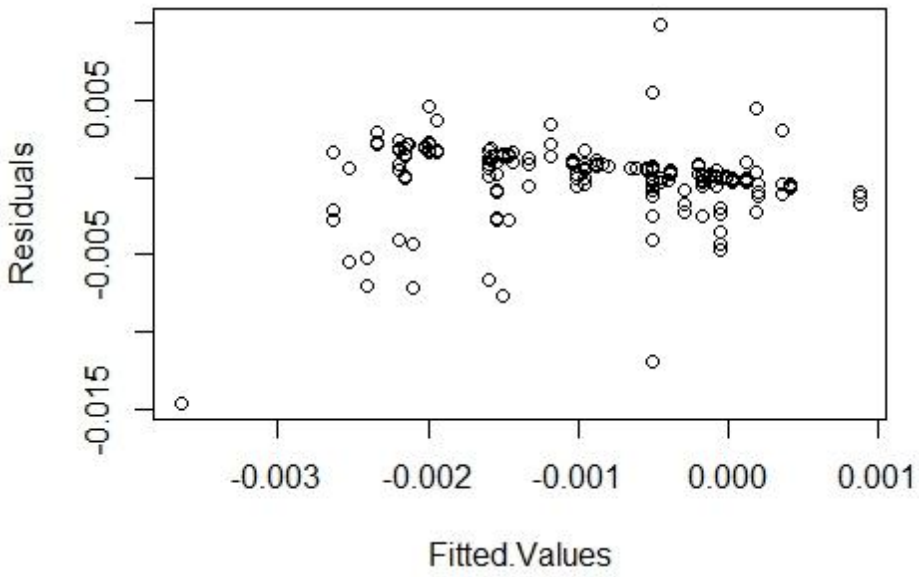


Figure 4.3 Fitted values of empirical model and the residuals



In order to determine the presence of heteroscedasticity in our data will be executed the White's General Test suggested in Greene (2002). H. White formulated a test based on the following observations:

- The correct covariance matrix for the least squares estimator is:

$$Var[\mathrm{b}|\mathrm{X}] = \sigma^2[\mathrm{X}'\mathrm{X}]^{-1}[\mathrm{X}'\Omega\ \mathrm{X}][\mathrm{X}'\mathrm{X}]^{-1}$$

- Where the conventional estimator for the variance is:

$$Var = s^2[\mathrm{X}'\mathrm{X}]^{-1}$$

- Without the presence of heteroscedasticity **"V"** will give the following consistent estimator:

$$Var[\mathrm{b}|\mathrm{X}]$$

The hypotheses used to test the presence of heteroscedasticity are the next ones:

Equation 4.5 Hypotheses to determine the presence of heteroscedasticity (White's test)

$$\boldsymbol{H_0}: Var_i = Var \text{ for all } i$$

$$\boldsymbol{H_1}:: \text{Not } \boldsymbol{H_0}$$

The result of the White's test using R Studio is presented in Table 4.5.

Table 4.5 White's test for constant variance

White's test for constant variance		
Data:		
White = 24.04	**df** = 0.38496990	**p-value** = 0.0002167

Thus, with the p-value of 0.0002167 < 0.05 presented in Table 4.5, we reject our null hypothesis and then infer that the data base presents heteroscedasticity problems and that our standard errors may be biased and can lead to biased inferences.

To confirm the result of the White's test, it will be implemented a Breusch Pagan test to evaluate if the errors are dependent on the values of the independent variables (Greene, 2002).

Equation 4.6 Hypotheses to determine heteroscedasticity (Breusch Pagan's)

$\boldsymbol{H_0}$**:** Errors are independent to the values of independent variables

$\boldsymbol{H_1}$**:** Errors are not independent to the values of independent variables

Table 4.6 Breusch Pagan test for independent errors

Breusch Pagan test for independent errors.	
Data:	
BP = 9.7612	**p-value** = 0.007592

Breusch Pagan's test gives a p-value of 0.007592 < 0.05, thus, it will reject the null hypothesis and then infer that the errors in the model are not independent to the values of the independent variables.

Since the data seems to be heteroscedastic because of the result of the White's and Breusch Pagan's tests, is necessary to proceed with the adjustments to fix this issue.

4.5 Fixing heteroscedasticity

Under the presence of heteroscedasticity, the Ordinary Least Squares model used to express the relation between the Immigration Surplus and the integration of immigrants is still unbiased but no longer efficient.

To fix this issue, it can be used the White Heteroscedastic Consistent standard errors commonly known as "Robust Standard Errors". White affirmed that heteroscedasticity can be fixed in the OLS by fixing the estimated standard errors (Murray, 2005).

The Ordinary Least Squares assuming homoscedasticity derive the formula of the estimated standard errors in the following way:

Equation 4.7 Estimated standard errors using OLS

$$Estimated\ standard\ Error\ (\widehat{\beta_\iota}) = \sqrt{\frac{\sum e_i^2}{(n-2)\sum x_i^2}}$$

In the case that it can't be assumed data is homoscedastic, White Heteroscedastic Consistent standard errors computed the estimated standard errors in the following way:

Equation 4.8 White's estimated standard errors

$$White's\ estimated\ standard\ Error\ (\widehat{\beta_\iota}) = \sqrt{\frac{\sum x_i^2 e_i^2}{(\sum x_i^2)^2}}$$

Regression 4.3 depicts the estimated coefficients of the model now using White's Heteroscedastic Consistent standard errors.

The Robust Standard Errors model shows that "ALM" and "AN" are significant. "Access to Labor Markets" shows a positive relation with respect to the Immigration Surplus; meanwhile, "Access to Nationality" has a negative impact in the Immigration Surplus. As it can be noticed the coefficients remain invariant with respect to the Ordinary Least Squares model but the adjustment to fix the heteroscedasticity has been made through the standard errors of the model. Now the coefficients should be unbiased and efficient.

Another way to fix the issue of heteroscedasticity and to confirm the efficiency of our model using White's approach is through a Generalized Least Squares Model (GLS). Regression 4.4 confirms the results from our previous model. For more information about the use of GLS, please consult "Econometrics. A Modern Introduction" by Murray; there is a detailed explanation about the method.

Regression 4.3

Model:

IS = ALM + AN + $\varepsilon_{c,t}$

Residuals:

Min	1Q	Median	3Q	Max
-0.0150909	0.0003629	0.0003953	0.0012065	0.0097230

Coefficients:

	Estimate	Robust standard error	T - value	Pr (>|t|)	
(Intercept)	-6.463e-05	5.509e-04	-0.117	0.90674	
ALM	2.007e-05	7.328e-06	2.739	0.00679	**
AN	-4.778e-05	1.085e-05	-4.403	1.83e-05	***

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.002602 on 180 degrees of freedom
Multiple R-squared: 0.103, **Adjusted R-squared:** 0.09301
F-statistic: 10.33on 3 and 180 DF, **p-value:** 5.656e-05

Regression 4.4

Generalized least squares fit by REML model:

IS = ALM + AN + $\varepsilon_{c,t}$

AIC	BIC	log Lik
-1595.59	-1582.818	801.795

Coefficients:

	Estimate	Standard error	T - value	Pr (>|t|)
(Intercept)	-6.463e-05	5.509e-04	-0.117	0.90674
ALM	2.007e-05	7.328e-06	2.739	0.00679
AN	-4.778e-05	1.085e-05	-4.403	1.83e-05

Standardized residuals:

Min	1Q	Median	3Q	MAX
5.7989432	-0.1394574	0.1519148	0.4636013	3.7362554

Residual standard error: 0.00260235
Degrees of freedom: 183 total, 180 residual

Once the issue of heteroscedasticity has been fixed and the coefficients have been estimated as unbiased and efficient, the project will proceed with the interpretation of the results and then the conclusions.

With this information and our results we can't reject our first hypothesis. So, friendly immigration policies that promote integration of immigrants in host countries should have an impact in the national income though the expansion of the immigration surplus. Nevertheless, the impact of these friendly immigration policies can vary because due to the sensibility to economic shocks or business cycles.

The empirical model implemented in this project depicted that the "Security Status of Long Term Residence" was not a relevant variable to explain the relation of the integration process and the Immigration Surplus. Since the coefficient of this regressor in the empirical model resulted to be insignificant, we can reject our second hypothesis and infer that encouraging integration through long term residence permits may not enhance the Immigration Surplus levels, at least during the period of economic downturns.

Also, empirical model showed that there is a small but significant relation between the Immigration Surplus and two migrant integration policy indicators ("Access to labor markets" and "Access to Nationality"). This for the thirty seven selected countries during the years of 2007 to 2012.

"Access to labor markets" showed a positive and significant coefficient with respect to the Immigration Surplus. The result will infer that during the years of 2007 to 2012, the integration of immigrants to host economies through the effective access to labor markets prompted an increase in the Immigrant Surplus. Thus, an increase of one unit in the migrant integration policy indicator of "Access to labor markets" should enhance in 0.00002007 units (0.002007%) the Immigration Surplus of a country. The Robust Standard Error in Regression 4.3 depicts a value of 0.000007328 (2.7388 times smaller than our estimated coefficient) which address that the sample mean presented in the model is close to the mean of the overall population.

As a result, we cannot reject our third hypothesis and infer that indeed, deeper integration to labor markets should lead to higher levels of immigration surplus and thus to an enlargement of the IS.

"Access to nationality" presented a negative and significant coefficient with respect to the Immigration Surplus. The result will infer that during the years of 2007 to 2012, the integration of immigrants to host economies through the access to a legal status of membership to the particular country may decrease the Immigration Surplus. Thus, an increase of one unit in the migrant integration policy indicator of "Access to

nationality" should reduce in 0.00004778 units (0.004778%) the Immigration Surplus of a country. The Robust Standard Error in Regression 4.3 depicts a value of 0.00001085 (4.4037 times smaller than our estimated coefficient) which address that the sample mean presented in the model is close to the mean of the overall population.

A possible reason that can explain the negative relation of the Immigration Surplus (2007-2012) and the "Access to nationality" relies on the idea that immigrants who acquire the nationality of the host country could be considered as more "valuable" in the labor markets (Danzer - Ulku, 2008). If the value of a worker increases may be reflected in a higher salary[7]. If salaries of immigrant labor forces increase, the redistribution of the national income proposed by Borjas (1994) will not have the same magnitude or impact and this may limit the effect of the IS.

In relation with our fourth hypothesis, we infer that immigration policies that contribute on granting the nationality to immigrants do have an impact in the immigration surplus in a certain way. However, during the period of 2007 to 2012 (economic downturn) this variable seemed to have a negative effect in relation to the expansion of the Immigration Surplus.

[7] *"Holding German citizenship had a significant impact on the income levels".* • Danzer, Alexander M. Ulku, Hulya. "Determinants of Integration and its Impact on the Economic Success of Immigrants: A Case Study of the Turkish Community in Berlin".

5. Conclusions.

International agreements and/or communities among countries, such as the European Union, have chosen to assume postures of better interconnected markets in order to promote free and undistorted competition within its members. As a result, labor markets have expanded the possibilities of demanders and suppliers to new territories. The free labor mobility (or less strict for non EU countries) has generated conflicted positions according to economic performance and the repercussions on wage levels and employment of local economies; especially because the public opinion is more sensitive to migration issues during economic downturns (OECD, 2009).

In this section will be expressed conclusions and important observations resulted from the computations of the Immigration Surpluses and the situation regarding to integration of immigrants in host countries. Finally, it will be described the recommendation for migration policies that can enhance the positive results of the free mobility of labor forces and the path for further researches.

The conclusions expressed here were built according to the concept of the Immigration Surplus developed by Borjas (1994). This concept assumes that a country can enhance the economic growth through variation in the national wages and a posterior redistribution of the national income as a result of the entry of foreign-born and/or third-country labor forces (Borjas, 1994).

The previous chapter computed one hundred and ninety five levels of Immigration Surplus for thirty seven countries during the years 2007 to 2012; the results revealed that the magnitude of this indicator is very short in almost all the cases. Longhi, Nijkamp and Poot (2004) share similar proportions to these results with the outcome of their research. *"We statistically summarized 344 estimates collected from a set of 18 studies computing the percentage change in the wage of a native worker with respect to a 1 percentage point increase in the ratio of immigrants over native workers. Overall, the effect is very small. A 1 percentage point increase in the proportion of immigrants in the labour force lowers wages across the investigated studies by only 0.119%"* (Longhi, Nijkamp and Poot, 2004).

Also, several Immigration Surpluses computed in the research depicted a negative value during the years of 2007 to 2012. It is important to remember the event of the financial crisis that rose during this period of time and the implications that this episode might have originated in the economy and specifically in the respective labor market conditions of each country where immigrants should interact.

OECD (2009) addressed that the consequences of the financial crisis on the labor market outcomes of immigrants were ambiguous; nevertheless, immigrants were among the groups that were considerably affected during this phenomenon. Immigrants represent a vulnerable group during economic downturns because of the following reasons:

- Immigrants are employed usually in industry sectors that are more sensible to business cycles.
- Have less secure contractual arrangements.
- Represent a less skilled group of the labor force.
- Self-employed immigrants have more risk to bankruptcy in their businesses.
- Discrimination during hiring processes. (OECD, 2009)

Proof of this immigrant's vulnerability is that some countries that experimented a rapid increase in the migration inflows during the economic growth period[8], now deal with severe structural problems of unemployment (e.g. Ireland and Spain) (OECD, 2009).

In the second chapter we described that: "*The size of the immigration surplus will be conditioned by the elasticity factor price of labor and the increase in the national income will react proportionally to it. The greater the changes in wage due to an increase in the labor supply, the greater will be the resulting immigration surplus. Inversely, if the wages are not so sensitive to changes in the labor supply it will be hard to increase the income"* (Borjas, 1994). Thus, if the labor market is not in the condition to react promptly to the changes resulted from a shock, the magnitude of the Immigration Surplus will be limited or possibly negative. Ruhs and Vargas (2012) affirm that during the economic downturn of 2008, the labor demand responded slower than during the preceding economic cycle (Ruhs - Vargas, 2012).

With this references, we can infer that the values presented in Appendix G does not necessarily contradict Borjas theory, but could be hardly influenced by the deterioration of the global macroeconomic outlook during the years of 2007 to 2012.

This project has also remarked that the level of integration of immigrants in a host country and the implementation of migration policies may impact the economic

[8] Between the years of 2003 to 2007 immigrants made important contribution to the employment growth, this helped to limit the wages and fuel the expansion phase of most of the OECD countries. During the same period unemployment rate decreased from 6.9% to 5.6%.
Canada also represented an example of a country with high levels of immigrant inflows. During the economic growth phase of the 1990's the outcomes of immigration caused several concerns because of the decline in the employment earnings and the rise of the rate of low income. This phenomenon helped to support the economic performance during the decade. (Chao, 2004)

growth of a country. The results of "Determinants of Integration and its Impact on the Economic Success of Immigrants: A Case Study of the Turkish Community in Berlin" (Danzer - Ulku, 2008) provide evidence that shows that deeper integration can lead to higher levels of economic success.

Zimmerman also reveals that the economic behavior of a country, where national and immigrant agents interact, may be influenced in a weak but significant way by the integration of the foreign-born and third-country labor forces (Zimmerman, 2007).

Integration process can be shaped by various economic, political and social factors. Danzer and Ulku (2008) confirm in their research the link between integration and certain aspects such as labor market conditions, ethnic networks or immigrant's skills, between others. *"Integration variable is an outcome of other non-independent processes, and needs to be understood well before employing it as a determinant of economic behavior and success"* (Danzer - Ulku, 2008).

The financial crisis also influenced the level of integration of immigrants in a host economy. According to OECD (2009), *"A strong macroeconomic shock may also jeopardize the medium and long-term integration of immigrants"* (OECD, 2009). This impact can be explained because during the economic downturns the measures implemented to stimulate the economy may discriminate between national and immigrant workers. As a consequence, foreign-born or third-country workers will be excluded from the potential help that labor forces can receive from the supporting institutions and thus limit their level of integration.

The outcome of the analysis confirms Borjas', Strielkowski's and Longhi's conclusions about the positive effects of immigrants' inclusion into foreign labor markets.

This conclusion can be compared with the United States case. The U.S. does not have an explicit policy or program about integration of immigrants supported by any public institution. However, the flexibility and access conditions of the labor market facilitate the integration of immigrants. As a result of the high levels of employment, the immigrant labor forces are usually identified as hard-working individuals that can enhance the economy of the host country. As double side effect, this kind of reputation also helps the integration process (Chao, 2004).

OECD (2009) also endorses the phenomenon that easy access to labor markets can enhance the national income of a country. In "*International Migration Outlook 2009*" (OECD, 2009) is explained that the dynamics of immigrant employment is determined by two aspects: 1. Better integration to the labor markets and 2. The entry of new immigrant workers to the market.

Additionally, the inclusion of immigrant labor forces into a host society could also serve as a way to expand the consumer demand for goods and services and thus raise the labor demand. As a consequence, in the medium to long run, this event can boost the investment levels by national, foreign-born or third-country labor forces (Danzer - Ulku, 2008).

Integration of immigrant through the access of nationality is described by Danzer and Ulku (2008) as: *"A process of developing the membership in a specific society and gaining access to its political, economic and social resources"* (Danzer - Ulku, 2008). If the population that has access to the national resources expands, the public expenditures may also follow the same path. A country that promotes the integration of immigrants in his territory should increase the economic incentives such as the investments into education, real access to labor markets, social assistance, healthcare, etc. (Danzer - Ulku, 2008). Thus, during an economic downturn the immigration surplus could be shrunken as a result of the increase of investments without substantial returns from the foreign labor force.

The conclusions presented in this project indicate that the integration of immigrants can impact in certain way to the economic performance of a country through the effect of the Immigration Surplus. During the time period of 2007 to 2012, the impact was transmitted by two main channels, the real access to labor markets and the access to nationality.

It is important to remark that even when the efforts to pursue the integration of immigrants into a host country assume positive outcomes in the national economy, the results may vary because of several factors such as the business cycles.

The effect and impact of the Immigration Surplus can be limited or mitigated by economic, social and/or political shocks due to the vulnerability of these social sector; however, this mitigation effect seems very hard to be measured probably because of its complexity or limited indicators that can reproduce the economic performance of immigrants in foreign labor markets.

Using the previous conclusions and the existent literature as a point of reference, the recommendations for migration policy are the following ones:

- Governments and migration policy makers should maintain or enhance the integration programs promoting effective, fair and non-discriminative labor market policies in order to encourage the economic success of immigrants.
- During periods of slow economic downturns or slow growth, policy makers should avoid to make substantial changes in the immigrant labor market conditions that

can leave the country unable to react quickly to general market conditions during the recovery phase (OECD, 2009).

- Immigration conditions or requirements should not become stricter during economic downturns because this may lead to an increase in irregular migration levels.
- Migrant sending countries should develop contingent strategies that can limit the contagion of negative economic shocks when remittances fall. Is important to remember that immigrant labor forces are hardly hit during economic or financial crisis.
- The demographic condition of Europe indicates longevity and low fertility in the population (OECD, 2009). As a consequence, the labor forces will shrink in the near future. This may represent problems to cover the demands from the consumer markets or increase the contributors-pensioned ratio.
- If the work forces of each country are not able to cover the labor demand with nationals, they will need to attract, or even compete, for immigrant labor forces. This will mean that governments should increase the incentives to bring foreign-born or third-country workers to the local labor market. In order to prevent risk in the expenses of public sector, governments should invest in these incentives during periods of economic growth.

This research give the guideline to further research models that will attempt to analyze the impact of migration in a host economy and the importance of integrating these immigrants into the society. The Migration Policy Institute will publish a new volume of the Migrant Policy Index (2013) in the spring of 2015; with this new information the researcher can replicate this investigation expanding the time period and give a wider perspective of the immigrant's integration during the recovery period after the financial crisis.

6. Appendix compilation

Appendix A

Labor income share (Unit labor cost)							
	2006	2007	2008	2009	2010	2011	2012
Armenia	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400	0.5400
Australia	0.5822	0.5816	0.5600	0.5608	0.5521	0.5564	0.5564
Austria	0.6614	0.6530	0.6626	0.6856	0.6748	0.6681	0.6747
Belgium	0.6706	0.6692	0.6817	0.6997	0.6853	0.6890	0.7047
Bulgaria	0.5372	0.5659	0.5130	0.5130	0.4600	0.4600	0.4600
Canada	0.6062	0.6069	0.5975	0.6288	0.6600	0.6600	0.6600
Cyprus	0.6294	0.6208	0.6105	0.5802	0.5500	0.5500	0.5500
Czech Republic	0.5829	0.5777	0.5861	0.5856	0.5907	0.5980	0.6067
Denmark	0.6430	0.6509	0.6505	0.6864	0.6461	0.6501	0.6452
Estonia	0.5532	0.5806	0.6217	0.6464	0.6084	0.5796	0.5862
Finland	0.6338	0.6143	0.6356	0.6867	0.6729	0.6747	0.6861
France	0.6757	0.6671	0.6691	0.6858	0.6864	0.6864	0.6904
Germany	0.6657	0.6525	0.6623	0.6987	0.6781	0.6765	0.6851
Greece	0.6466	0.6399	0.6079	0.6549	0.6594	0.6379	0.6022
Hungary	0.6105	0.6212	0.6179	0.6189	0.5997	0.5946	0.6002
Ireland	0.5764	0.5926	0.6498	0.6476	0.6087	0.5825	0.5676
Italy	0.6708	0.6658	0.6716	0.6855	0.6859	0.6825	0.6868
Japan	0.6014	0.5890	0.6033	0.6077	0.5912	0.6058	0.6058
Latvia	0.5654	0.5950	0.6265	0.6282	0.6300	0.6300	0.6300
Lithuania	0.5603	0.5761	0.5791	0.5596	0.5400	0.5400	0.5400
Luxembourg	0.5186	0.5077	0.5545	0.5998	0.5631	0.5610	0.5727
Malta	0.5100	0.5100	0.5400	0.5400	0.5700	0.5700	0.5700
Netherlands	0.6656	0.6635	0.6661	0.6991	0.6879	0.6862	0.6965
Norway	0.5049	0.5309	0.5171	0.5762	0.5552	0.5436	0.5460
Poland	0.5415	0.5363	0.5604	0.5434	0.5462	0.5367	0.5317
Portugal	0.6765	0.6628	0.6716	0.6753	0.6662	0.6612	0.6418
Romania	0.6122	0.5692	0.5261	0.4831	0.4400	0.4400	0.4400
Serbia	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Slovakia	0.4959	0.4954	0.4992	0.5349	0.5250	0.5228	0.5163
Slovenia	0.6936	0.6821	0.6970	0.7342	0.7474	0.7342	0.7404
South Korea	0.7753	0.7660	0.7636	0.7414	0.7062	0.7109	0.7176
Spain	0.6308	0.6301	0.6375	0.6376	0.6370	0.6282	0.6098
Sweden	0.6489	0.6572	0.6546	0.6730	0.6508	0.6409	0.6508
Switzerland	0.6207	0.6140	0.6136	0.6436	0.6274	0.6383	0.6468
Turkey	0.3842	0.3481	0.3121	0.2760	0.2400	0.2400	0.2400

UK	0.6815	0.6797	0.6764	0.6983	0.6957	0.6958	0.7048
USA	0.6516	0.6511	0.6552	0.6484	0.6381	0.6374	0.6374

Source:

- The Labour Share of Income around the World, Evidence from a Panel Dataset Development Economics and Public Policy Cluster. Institute of Development Policy and Management, School of Environment and Development, University of Manchester. Available at http://www.sed.manchester.ac.uk/idpm/research/publications/wp/depp/documents/depp_wp32.pdf
- The labour income share in the European Union, Employment in Europe. Available at http://ec.europa.eu/social/BlobServlet?docId=2280&langId=en
- Assessment of the Labour Market in Serbia, Wiener Institut für Internationale Wirtschaftsvergleiche. Available at http://wiiw.ac.at/assessment-of-the-labour-market-in-serbia-p-2348.html
- Unit Labour Costs - Annual Indicators, OECD Statistics. Available at http://stats.oecd.org/Index.aspx?DataSetCode=ULC_ANN

Appendix B

	Total labor force (Labor units)						
	2006	2007	2008	2009	2010	2011	2012
Armenia	1,406,436.55	1,392,458.99	1,379,176.16	1,394,340.02	1,451,010.11	1,464,961.25	1,480,503.74
Australia	10,806,942.76	11,085,529.45	11,357,176.96	11,568,762.18	11,732,823.49	11,873,749.92	12,005,996.51
Austria	4,151,191.53	4,244,400.34	4,284,067.81	4,325,556.62	4,327,015.41	4,366,242.26	4,405,669.38
Belgium	4,640,538.60	4,732,748.59	4,774,549.11	4,788,754.66	4,887,483.71	4,870,948.51	4,908,458.70
Bulgaria	3,478,286.56	3,565,252.74	3,643,133.49	3,572,112.27	3,480,973.59	3,347,103.81	3,353,935.33
Canada	17,925,315.34	18,318,195.40	18,648,747.58	18,785,081.32	18,984,515.22	19,144,603.31	19,341,079.24
Cyprus	537,690.46	551,047.68	560,532.71	571,331.19	584,477.68	586,250.13	593,905.35
Czech Republic	5,195,072.01	5,204,639.81	5,231,733.15	5,275,721.77	5,262,607.66	5,242,209.53	5,282,718.07
Denmark	2,933,042.86	2,933,486.22	2,966,071.98	2,952,487.04	2,930,964.72	2,930,445.23	2,913,883.02
Estonia	693,580.75	695,215.51	702,063.94	699,639.88	696,136.73	705,031.10	697,884.19
Finland	2,682,611.07	2,709,258.74	2,736,986.60	2,710,909.61	2,700,262.62	2,714,984.27	2,719,839.51
France	28,946,653.25	29,188,500.34	29,412,153.86	29,677,817.40	29,839,937.73	29,904,922.36	30,126,306.42
Germany	41,605,652.23	41,860,106.24	41,939,193.47	41,983,039.05	41,990,452.26	42,490,516.98	42,522,729.59
Greece	5,108,401.93	5,118,383.82	5,136,117.80	5,201,963.92	5,219,816.85	5,155,669.21	5,125,115.64
Hungary	4,309,122.49	4,296,178.13	4,272,341.31	4,272,864.84	4,310,481.31	4,334,179.99	4,397,753.49
Ireland	2,130,060.17	2,195,094.78	2,206,695.73	2,179,005.06	2,143,229.12	2,170,984.05	2,167,325.29
Italy	24,817,231.75	24,901,925.68	25,250,657.31	25,094,034.07	25,059,918.36	25,107,059.03	25,658,144.20
Japan	66,605,674.62	66,808,379.53	66,630,898.45	66,296,543.64	66,420,608.98	65,569,737.03	65,281,089.81
Latvia	1,163,127.50	1,183,621.84	1,205,212.78	1,174,115.06	1,134,026.92	1,036,890.94	1,041,670.25
Lithuania	1,594,616.50	1,607,313.95	1,618,572.38	1,647,478.28	1,638,266.59	1,540,154.43	1,535,510.04
Luxembourg	213,562.45	216,281.78	221,180.21	234,862.60	237,978.11	242,807.83	253,115.73
Malta	166,048.94	170,227.41	172,691.70	174,427.78	178,308.50	181,379.86	185,672.70
Netherlands	11,257,862.65	11,268,007.99	11,300,787.42	11,374,549.55	11,445,603.13	11,507,528.76	11,577,842.47
Norway	2,454,507.67	2,516,076.42	2,592,052.41	2,595,142.13	2,608,239.80	2,633,450.15	2,674,699.64
Poland	17,334,574.21	17,332,847.62	17,586,185.14	17,868,450.03	18,141,020.05	18,390,262.28	18,529,723.95

Portugal	5,579,415.22	5,615,587.38	5,620,028.87	5,577,679.28	5,587,034.70	5,498,286.34	5,472,450.06
Romania	10,253,562.21	10,253,235.08	10,205,931.66	10,170,506.67	10,221,032.96	10,121,191.68	10,199,999.99
Serbia	2,630,691.00	2,655,736.00	2,821,724.00	2,616,437.00	2,396,244.00	2,253,209.00	2,228,343.00
Slovakia	2,662,279.02	2,664,387.67	2,707,015.53	2,703,000.65	2,719,124.11	2,706,401.90	2,736,136.56
Slovenia	1,023,040.77	1,038,356.41	1,034,977.69	1,044,098.62	1,044,576.33	1,024,814.41	1,021,221.35
South Korea	24,182,951.44	24,468,116.24	24,624,459.88	24,633,579.91	24,955,045.84	25,379,945.71	25,765,233.89
Spain	21,714,366.25	22,263,361.57	22,887,040.73	23,075,327.21	23,202,824.49	23,257,658.16	23,280,057.08
Sweden	4,806,372.34	4,864,134.32	4,914,929.29	4,926,876.61	4,972,086.94	5,038,025.96	5,080,956.09
Switzerland	4,236,725.87	4,307,720.26	4,408,492.51	4,482,630.09	4,513,246.60	4,585,297.42	4,640,484.76
Turkey	22,641,187.99	23,044,417.44	23,752,996.99	24,737,115.66	25,644,596.21	26,634,364.80	27,050,106.65
UK	31,083,614.84	31,171,097.12	31,555,454.68	31,684,438.33	31,777,156.06	32,029,362.80	32,377,782.48
USA	154,694,539.76	155,976,570.18	157,724,795.63	157,889,958.41	157,453,653.38	157,567,914.11	158,686,471.55

Source:

- Labor Force, Total, The World Bank. Available at http://data.worldbank.org/indicator/SL.TLF.TOTL.IN
- LABOUR FORCE SURVEY, 2012, STATISTICAL OFFICE OF THE REPUBLIC OF SERBIA. Available at http://webrzs.stat.gov.rs/WebSite/repository/documents/00/00/96/02/SB_564_ARS_2012+sajt.pdf

Appendix C

	Year to year percentage change in total labor force					
	2006 - 2007	2007 - 2008	2008 - 2009	2009 - 2010	2010 - 2011	2011 - 2012
Armenia	-0.9938%	-0.9539%	1.0995%	4.0643%	0.9615%	1.0609%
Australia	2.5778%	2.4505%	1.8630%	1.4181%	1.2011%	1.1138%
Austria	2.2454%	0.9346%	0.9684%	0.0337%	0.9066%	0.9030%
Belgium	1.9871%	0.8832%	0.2975%	2.0617%	-0.3383%	0.7701%
Bulgaria	2.5003%	2.1844%	-1.9495%	-2.5514%	-3.8458%	0.2041%
Canada	2.1918%	1.8045%	0.7311%	1.0617%	0.8433%	1.0263%
Cyprus	2.4842%	1.7213%	1.9265%	2.3010%	0.3033%	1.3058%
Czech Republic	0.1842%	0.5206%	0.8408%	-0.2486%	-0.3876%	0.7727%
Denmark	0.0151%	1.1108%	-0.4580%	-0.7290%	-0.0177%	-0.5652%
Estonia	0.2357%	0.9851%	-0.3453%	-0.5007%	1.2777%	-1.0137%
Finland	0.9933%	1.0234%	-0.9528%	-0.3927%	0.5452%	0.1788%
France	0.8355%	0.7662%	0.9032%	0.5463%	0.2178%	0.7403%
Germany	0.6116%	0.1889%	0.1045%	0.0177%	1.1909%	0.0758%
Greece	0.1954%	0.3465%	1.2820%	0.3432%	-1.2289%	-0.5926%
Hungary	-0.3004%	-0.5548%	0.0123%	0.8804%	0.5498%	1.4668%
Ireland	3.0532%	0.5285%	-1.2548%	-1.6418%	1.2950%	-0.1685%
Italy	0.3413%	1.4004%	-0.6203%	-0.1360%	0.1881%	2.1949%
Japan	0.3043%	-0.2657%	-0.5018%	0.1871%	-1.2810%	-0.4402%
Latvia	1.7620%	1.8241%	-2.5803%	-3.4143%	-8.5656%	0.4609%
Lithuania	0.7963%	0.7005%	1.7859%	-0.5591%	-5.9888%	-0.3016%
Luxembourg	1.2733%	2.2648%	6.1861%	1.3265%	2.0295%	4.2453%
Malta	2.5164%	1.4476%	1.0053%	2.2248%	1.7225%	2.3668%
Netherlands	0.0901%	0.2909%	0.6527%	0.6247%	0.5410%	0.6110%
Norway	2.5084%	3.0196%	0.1192%	0.5047%	0.9666%	1.5664%
Poland	-0.0100%	1.4616%	1.6050%	1.5254%	1.3739%	0.7583%
Portugal	0.6483%	0.0791%	-0.7535%	0.1677%	-1.5885%	-0.4699%
Romania	-0.0032%	-0.4614%	-0.3471%	0.4968%	-0.9768%	0.7786%
Serbia	0.9520%	6.2502%	-7.2752%	-8.4158%	-5.9691%	-1.1036%
Slovakia	0.0792%	1.5999%	-0.1483%	0.5965%	-0.4679%	1.0987%
Slovenia	1.4971%	-0.3254%	0.8813%	0.0458%	-1.8919%	-0.3506%
South Korea	1.1792%	0.6390%	0.0370%	1.3050%	1.7027%	1.5181%
Spain	2.5283%	2.8014%	0.8227%	0.5525%	0.2363%	0.0963%
Sweden	1.2018%	1.0443%	0.2431%	0.9176%	1.3262%	0.8521%
Switzerland	1.6757%	2.3393%	1.6817%	0.6830%	1.5964%	1.2036%
Turkey	1.7810%	3.0748%	4.1431%	3.6685%	3.8596%	1.5609%
UK	0.2814%	1.2331%	0.4088%	0.2926%	0.7937%	1.0878%
USA	0.8287%	1.1208%	0.1047%	-0.2763%	0.0726%	0.7099%

Source: Own computations based on World Bank Data Base and Statistical Office of the Republic of Serbia.

Appendix D

	Average annual wages							
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Currency**
Armenia	747,516.00	890,724.00	1,048,872.00	1,152,228.00	1,231,824.00	1,297,104.00	1,357,956.00	AMD
Australia	46,274.82	47,554.48	73,879.23	46,904.51	47,793.47	48,752.75	49,655.22	USD
Austria	22,689.83	23,390.35	24,027.42	24,425.96	24,859.68	25,349.63	26,283.09	EUR
Belgium	23,106.35	23,744.58	25,218.99	25,370.80	25,589.47	26,540.91	28,980.45	EUR
Bulgaria	1,364.15	1,612.13	2,014.74	2,229.54	2,275.63	2,558.49	2,710.66	EUR
Canada	41,884.57	42,901.96	43,430.10	43,878.31	44,009.13	44,477.41	45,520.66	USD
Cyprus	19,635.00	20,391.00	21,606.00	22,440.00	22,974.00	23,613.00	24,006.00	EUR
Czech Republic	5,563.00	6,094.84	7,377.51	7,144.48	7,613.68	7,914.69	8,003.58	EUR
Denmark	22,180.96	23,246.45	24,094.69	24,646.87	25,248.95	25,692.58	26,361.65	EUR
Estonia	4,969.12	5,794.57	6,353.39	6,395.70	6,438.00	6,663.55	7,394.71	EUR
Finland	20,796.66	22,046.58	23,170.64	23,643.06	24,449.15	25,385.06	25,580.24	EUR
France	18,823.23	19,535.83	20,307.28	20,613.61	21,165.91	21,926.16	22,209.36	EUR
Germany	23,597.06	24,180.00	24,739.09	24,552.11	25,296.90	26,252.91	26,485.86	EUR
Greece	9,797.23	10,589.92	10,693.01	11,871.80	13,098.62	10,110.60	14,295.87	EUR
Hungary	5,111.73	5,819.19	6,293.04	5,776.22	5,858.37	6,034.92	5,668.33	EUR
Ireland	16,237.57	16,917.86	17,658.38	17,252.59	17,527.09	17,816.51	17,639.07	EUR
Italy	16,669.16	17,041.62	17,728.44	18,107.51	18,639.13	19,171.74	19,359.63	EUR
Japan	19,287.07	17,472.55	17,878.17	20,910.91	23,355.39	24,604.68	27,322.42	EUR
Latvia	3,233.25	4,151.11	5,030.92	5,137.18	5,095.70	5,315.83	5,624.47	EUR
Lithuania	3,376.33	4,147.50	4,852.93	4,522.84	4,439.13	4,555.16	4,764.75	EUR
Luxembourg	24,785.56	25,769.03	26,179.36	26,867.20	27,496.69	28,016.00	29,061.22	EUR
Malta	8,164.08	8,354.51	9,021.60	9,207.14	9,651.90	10,571.73	10,971.96	EUR
Netherlands	22,132.84	22,847.63	23,477.10	24,123.00	24,649.91	24,969.61	25,730.49	EUR
Norway	28,001.52	29,613.57	30,240.39	29,206.60	33,064.14	35,360.93	38,637.98	EUR
Poland	4,387.00	4,983.34	5,508.58	4,625.30	5,189.33	5,370.04	5,429.23	EUR

Portugal	9,214.76	9,956.32	10,327.29	10,598.57	10,736.52	10,882.88	10,543.50	EUR
Romania	2,413.61	3,073.49	3,436.55	3,217.61	3,567.16	3,836.08	3,606.38	EUR
Serbia	260,942.00	333,425.00	393,086.00	381,094.00	409,911.00	456,002.00	496,632.00	RSD
Slovakia	3,787.20	5,046.11	5,565.42	5,706.13	5,883.94	6,094.20	6,272.02	EUR
Slovenia	7,945.16	8,489.90	9,153.74	9,333.88	9,818.99	9,908.23	10,180.81	EUR
South Korea	27,197.23	27,686.28	27,574.04	27,593.18	27,885.73	28,271.46	28,725.21	USD
Spain	13,822.59	14,309.52	15,131.17	15,694.62	16,098.43	16,382.09	16,818.30	EUR
Sweden	23,199.99	24,108.60	24,270.95	22,418.14	25,368.71	27,319.80	29,237.97	EUR
Switzerland	24,399.79	24,184.49	24,884.07	26,366.77	28,938.70	33,334.02	38,310.81	EUR
Turkey	5,253.92	5,861.79	6,015.79	5,038.22	6,319.80	5,640.12	7,354.27	EUR
UK	25,046.10	26,402.40	22,766.58	20,316.03	21,696.34	21,354.13	23,905.35	EUR
USA	16,924.71	16,265.73	16,088.45	17,751.53	19,209.90	18,724.73	20,910.82	EUR

Currencies:

AMD - Armenia Dram **EUR** – Euro **RSD** - Serbian Dinar **USD** - United States Dollar

Source:

- Average Annual Wages, OECD Statistics. Available at http://stats.oecd.org/Index.aspx?DataSetCode=AV_AN_WAGE
- Average monthly nominal wages, drams / 2014, National Statistical Service of the Republic of Armenia. Available at http://www.armstat.am/en/?nid=126&id=08001
- Annual Net Earnings, Eurostat. 05 2014. European Commission. Available at http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=earn_nt_net&
- Zarade - prosečne neto zarade u Srbiji, Cekos in. Available at http://www.cekos.rs/statistika/zarade-prose%C4%8Dne-neto-zarade-u-srbiji/2009

Appendix E

	Year to year percentage change in average annual wages					
	2006 - 2007	2007 - 2008	2008 - 2009	2009 - 2010	2010 - 2011	2011 - 2012
Armenia	19.158%	17.755%	9.854%	6.908%	5.299%	4.691%
Australia	2.765%	55.357%	-36.512%	1.895%	2.007%	1.851%
Austria	3.087%	2.724%	1.659%	1.776%	1.971%	3.682%
Belgium	2.762%	6.209%	0.602%	0.862%	3.718%	9.192%
Bulgaria	18.178%	24.974%	10.661%	2.067%	12.430%	5.948%
Canada	2.429%	1.231%	1.032%	0.298%	1.064%	2.346%
Cyprus	3.850%	5.959%	3.860%	2.380%	2.781%	1.664%
Czech Republic	9.560%	21.045%	-3.159%	6.567%	3.954%	1.123%
Denmark	4.804%	3.649%	2.292%	2.443%	1.757%	2.604%
Estonia	16.612%	9.644%	0.666%	0.661%	3.503%	10.973%
Finland	6.010%	5.099%	2.039%	3.409%	3.828%	0.769%
France	3.786%	3.949%	1.508%	2.679%	3.592%	1.292%
Germany	2.470%	2.312%	-0.756%	3.034%	3.779%	0.887%
Greece	8.091%	0.973%	11.024%	10.334%	-22.812%	41.395%
Hungary	13.840%	8.143%	-8.213%	1.422%	3.014%	-6.074%
Ireland	4.190%	4.377%	-2.298%	1.591%	1.651%	-0.996%
Italy	2.234%	4.030%	2.138%	2.936%	2.857%	0.980%
Japan	-9.408%	2.321%	16.963%	11.690%	5.349%	11.046%
Latvia	28.388%	21.195%	2.112%	-0.807%	4.320%	5.806%
Lithuania	22.840%	17.009%	-6.802%	-1.851%	2.614%	4.601%
Luxembourg	3.968%	1.592%	2.627%	2.343%	1.889%	3.731%
Malta	2.333%	7.985%	2.057%	4.831%	9.530%	3.786%
Netherlands	3.230%	2.755%	2.751%	2.184%	1.297%	3.047%
Norway	5.757%	2.117%	-3.419%	13.208%	6.946%	9.267%
Poland	13.593%	10.540%	-16.035%	12.194%	3.482%	1.102%
Portugal	8.048%	3.726%	2.627%	1.302%	1.363%	-3.118%
Romania	27.340%	11.813%	-6.371%	10.864%	7.539%	-5.988%
Serbia	27.777%	17.893%	-3.051%	7.562%	11.244%	8.910%
Slovakia	33.241%	10.291%	2.528%	3.116%	3.573%	2.918%
Slovenia	6.856%	7.819%	1.968%	5.197%	0.909%	2.751%
South Korea	1.798%	-0.405%	0.069%	1.060%	1.383%	1.605%
Spain	3.523%	5.742%	3.724%	2.573%	1.762%	2.663%
Sweden	3.916%	0.673%	-7.634%	13.162%	7.691%	7.021%
Switzerland	-0.882%	2.893%	5.958%	9.754%	15.188%	14.930%
Turkey	11.570%	2.627%	-16.250%	25.437%	-10.755%	30.392%
UK	5.415%	-13.771%	-10.764%	6.794%	-1.577%	11.947%
USA	-3.894%	-1.090%	10.337%	8.215%	-2.526%	11.675%

Source: Own computations based on OECD Statistics, National Service of Republic of Armenia, Eurostat and Cekos in.

Appendix F

	International Migrant Stock					
	2007	**2008**	**2009**	**2010**	**2011**	**2012**
Armenia	13.64%	13.64%	12.29%	10.94%	10.13%	9.23%
Australia	21.30%	21.30%	21.33%	21.35%	21.36%	21.38%
Austria	14.84%	14.84%	15.23%	15.62%	15.86%	16.12%
Belgium	8.68%	8.68%	8.82%	8.95%	9.03%	9.12%
Bulgaria	1.38%	1.38%	1.40%	1.42%	1.43%	1.44%
Canada	20.30%	20.30%	20.70%	21.10%	21.34%	21.60%
Cyprus	12.61%	12.61%	13.29%	13.97%	14.38%	14.83%
Czech Republic	4.36%	4.36%	4.33%	4.30%	4.28%	4.26%
Denmark	8.24%	8.24%	8.47%	8.71%	8.85%	9.01%
Estonia	14.30%	14.30%	13.95%	13.61%	13.40%	13.18%
Finland	3.73%	3.73%	3.97%	4.20%	4.34%	4.50%
France	10.26%	10.26%	10.27%	10.27%	10.27%	10.27%
Germany	13.00%	13.00%	13.08%	13.15%	13.19%	13.24%
Greece	9.40%	9.40%	9.70%	10.01%	10.19%	10.40%
Hungary	3.49%	3.49%	3.59%	3.68%	3.74%	3.80%
Ireland	17.46%	17.46%	18.77%	20.08%	20.86%	21.74%
Italy	6.30%	6.30%	6.84%	7.37%	7.69%	8.05%
Japan	1.63%	1.63%	1.67%	1.70%	1.72%	1.74%
Latvia	15.73%	15.73%	15.35%	14.96%	14.73%	14.47%
Lithuania	4.38%	4.38%	4.15%	3.92%	3.78%	3.63%
Luxembourg	33.87%	33.87%	34.02%	34.17%	34.26%	34.36%
Malta	3.30%	3.30%	3.50%	3.71%	3.83%	3.97%
Netherlands	10.59%	10.59%	10.56%	10.54%	10.53%	10.51%
Norway	8.97%	8.97%	9.44%	9.92%	10.21%	10.52%
Poland	2.16%	2.16%	2.16%	2.16%	2.16%	2.16%
Portugal	7.93%	7.93%	8.28%	8.63%	8.84%	9.07%
Romania	0.62%	0.62%	0.62%	0.62%	0.62%	0.62%
Serbia	8.13%	8.13%	7.67%	7.20%	6.92%	6.61%
Slovakia	2.36%	2.36%	2.38%	2.41%	2.42%	2.44%
Slovenia	8.18%	8.18%	8.09%	8.00%	7.95%	7.88%
South Korea	1.11%	1.11%	1.10%	1.08%	1.07%	1.06%
Spain	12.23%	12.23%	13.03%	13.84%	14.32%	14.86%
Sweden	13.12%	13.12%	13.52%	13.92%	14.16%	14.43%
Switzerland	22.42%	22.42%	22.47%	22.52%	22.55%	22.58%
Turkey	1.96%	1.96%	1.96%	1.96%	1.95%	1.95%
UK	10.03%	10.03%	10.19%	10.36%	10.46%	10.57%
USA	13.56%	13.56%	13.70%	13.84%	13.92%	14.01%

Source: Own computations based on World Development Indicators, The World Bank. Available at http://data.worldbank.org/indicator/SM.POP.TOTL/countries/1W?display=graph

Appendix G

	Immigration Surplus (As percentage of the total economy)					
	2007	2008	2009	2010	2011	2012
Armenia	0.037386%	0.032588%	-0.056040%	-0.295497%	-0.073984%	-0.073079%
Australia	-1.225181%	-0.056135%	0.064937%	-0.937630%	-0.757280%	-0.763003%
Austria	-0.468979%	-0.237190%	-0.440602%	-0.014106%	-0.356323%	-0.201825%
Belgium	-0.170577%	-0.035451%	-0.130393%	-0.618122%	0.024370%	-0.023645%
Bulgaria	-0.000704%	-0.000417%	0.000896%	0.005424%	0.001397%	-0.000159%
Canada	-1.042265%	-1.735571%	-0.918171%	-4.844829%	-1.120869%	-0.642825%
Cyprus	-0.253418%	-0.125482%	-0.230221%	-0.422802%	-0.052956%	-0.421074%
Czech Republic	-0.001091%	-0.001401%	0.014843%	0.002129%	0.005502%	-0.038590%
Denmark	-0.000618%	-0.063392%	0.046548%	0.065414%	0.002354%	0.053115%
Estonia	-0.009244%	-0.068036%	0.342468%	0.470545%	-0.205758%	0.050157%
Finland	-0.005419%	-0.007816%	0.022367%	0.005403%	-0.007560%	-0.014074%
France	-0.077408%	-0.068319%	-0.216234%	-0.073693%	-0.021933%	-0.208671%
Germany	-0.133375%	-0.045205%	0.081665%	-0.003336%	-0.182214%	-0.050610%
Greece	-0.005958%	-0.089354%	-0.033617%	-0.009665%	-0.016176%	0.004319%
Hungary	0.000735%	0.002428%	0.000056%	-0.022618%	-0.006972%	0.009813%
Ireland	-0.476005%	-0.102379%	-0.539276%	0.957786%	-0.804878%	-0.193634%
Italy	-0.013931%	-0.038820%	0.039491%	0.006307%	-0.010498%	-0.417749%
Japan	0.000233%	0.000882%	0.000239%	-0.000126%	0.002014%	0.000349%
Latvia	-0.050280%	-0.070022%	0.949603%	-3.296203%	1.470800%	-0.055966%
Lithuania	-0.002355%	-0.002536%	0.014100%	-0.015657%	0.106574%	0.002719%
Luxembourg	-0.918340%	-4.485016%	-8.102210%	-1.828956%	-3.488760%	-3.804210%
Malta	-0.022910%	-0.004680%	-0.014354%	-0.014276%	-0.006324%	-0.024524%
Netherlands	-0.010467%	-0.039590%	-0.092952%	-0.110248%	-0.159702%	-0.077575%
Norway	-0.074311%	-0.265975%	0.008079%	-0.008532%	-0.033727%	-0.045404%
Poland	0.000009%	-0.001816%	0.001270%	-0.001596%	-0.004943%	-0.008535%
Portugal	-0.013993%	-0.004104%	0.060981%	-0.027028%	0.264254%	-0.036013%
Romania	0.000000%	0.000039%	-0.000050%	-0.000038%	0.000109%	0.000110%
Serbia	-0.008452%	-0.077500%	-0.473248%	0.220863%	0.093608%	0.019262%
Slovakia	-0.000031%	-0.002114%	0.000872%	-0.002794%	0.001942%	-0.005627%
Slovenia	-0.052104%	0.009927%	-0.110066%	-0.002202%	0.500246%	0.030197%
South Korea	-0.003293%	0.007674%	-0.002453%	-0.005389%	-0.005273%	-0.003973%
Spain	-0.254923%	-0.202923%	-0.105319%	-0.102292%	-0.071578%	-0.021122%
Sweden	-0.153186%	-0.821774%	0.018452%	-0.039067%	-0.101024%	-0.076526%
Switzerland	2.903361%	-1.241307%	-0.456492%	-0.110384%	-0.169350%	-0.132224%
Turkey	-0.001039%	-0.007056%	0.001355%	-0.000666%	0.001652%	-0.000236%
UK	-0.016595%	0.029440%	0.013329%	-0.015062%	0.181900%	-0.034440%
USA	0.122339%	0.607195%	-0.006042%	0.019742%	0.017190%	-0.037116%

Source: Own computations based on World Bank Data Base, Statistical Office of the Republic of Serbia, OECD Statistics, National Service of Republic of Armenia, Eurostat, Cekos in, World Development Indicators and The World Bank.

Appendix H

	Immigration Surplus (Expressed in current U.S. dollars)					
	2007	2008	2009	2010	2011	2012
Armenia	3,441,894.84	3,800,414.94	- 4,846,347.31	- 27,363,935.00	- 7,503,728.08	- 7,271,743.02
Australia	- 10,461,264,381.98	- 592,505,592.68	601,777,786.69	- 10,705,802,879.74	- 10,502,628,197.73	- 11,692,321,181.04
Austria	- 1,758,865,338.60	- 982,370,424.87	- 1,690,740,001.01	- 52,927,988.74	- 1,480,918,226.63	- 796,619,809.81
Belgium	- 784,005,518.12	- 179,870,740.66	- 617,091,106.00	- 2,893,299,553.07	124,983,420.68	- 114,266,059.25
Bulgaria	- 296,349.77	- 216,150.36	435,242.83	2,588,852.18	748,058.80	- 81,122.24
Canada	- 14,842,538,325.75	- 26,080,048,549.36	- 12,281,247,634.78	- 76,404,897,622.22	- 19,926,676,226.77	- 11,708,574,295.93
Cyprus	- 55,351,045.97	- 31,773,914.13	- 54,200,144.89	- 97,804,377.49	- 13,160,144.21	- 95,865,531.59
Czech Republic	- 1,969,688.63	- 3,158,547.49	29,273,599.63	4,225,793.64	11,883,882.14	- 75,808,338.04
Denmark	- 1,923,224.23	- 217,993,915.37	144,550,933.88	204,985,712.67	7,854,977.46	167,253,981.77
Estonia	- 2,033,131.17	- 16,180,102.02	66,461,537.77	88,977,112.94	- 46,342,517.02	11,230,258.35
Finland	- 13,337,564.01	- 21,258,054.91	53,542,583.46	12,704,776.82	- 19,812,063.56	- 34,840,672.04
France	- 1,998,971,487.74	- 1,934,651,574.85	- 5,664,636,785.44	- 1,877,926,424.44	- 609,664,840.97	- 5,452,310,688.23
Germany	- 4,433,116,371.88	- 1,638,085,672.92	2,693,489,001.36	- 109,502,175.99	- 6,605,000,110.32	- 1,734,974,267.16
Greece	- 18,196,601.27	- 305,229,427.96	- 107,915,077.18	- 28,251,011.59	- 46,850,446.14	10,758,605.17
Hungary	1,000,276.71	3,744,915.44	71,256.79	- 28,838,739.66	- 9,582,940.73	12,226,953.57
Ireland	- 1,235,584,703.18	- 270,315,595.58	- 1,215,758,946.94	1,992,405,430.89	- 1,817,680,791.12	- 408,124,624.26
Italy	- 296,339,373.49	- 895,701,102.60	833,716,199.51	128,789,476.77	- 230,441,455.56	- 8,416,264,973.82
Japan	10,156,262.80	42,764,186.59	12,056,301.68	- 6,927,756.41	118,738,638.61	20,791,494.32
Latvia	- 14,463,320.56	- 23,576,047.58	245,717,318.64	- 791,407,781.26	418,888,908.82	- 15,879,016.09
Lithuania	- 920,857.49	- 1,198,450.82	5,195,439.82	- 5,684,413.70	45,690,453.23	1,151,383.51
Luxembourg	- 471,297,965.40	- 2,455,220,509.40	- 4,004,174,923.28	- 945,825,203.23	- 2,022,012,665.66	- 2,099,104,009.21
Malta	- 1,721,442.85	- 400,301.68	- 1,162,618.68	- 1,165,502.41	- 578,804.14	- 2,138,931.91
Netherlands	- 81,913,123.88	- 344,757,994.89	- 740,208,249.42	- 851,213,005.56	- 1,328,736,190.86	- 597,757,984.45
Norway	- 292,397,453.68	- 1,207,221,463.66	30,605,723.80	- 35,937,772.57	- 165,622,482.62	- 226,868,328.26
Poland	39,086.70	- 9,615,267.86	5,474,232.17	- 7,495,604.46	- 25,489,279.35	- 41,801,849.82

Portugal	- 32,426,721.20	- 10,338,030.39	142,767,844.82	- 61,474,204.83	628,066,786.81	- 76,445,179.48
Romania	214.05	80,071.81	- 82,629.88	- 63,208.38	207,055.89	211,376.82
Serbia	- 3,292,179.93	- 37,014,265.28	- 190,479,755.48	81,697,091.83	40,524,578.07	7,221,272.40
Slovakia	- 26,490.18	- 2,069,865.84	761,024.47	- 2,433,106.02	1,862,066.91	- 5,129,006.88
Slovenia	- 24,648,940.82	5,420,938.68	- 53,994,211.69	- 1,033,151.57	251,374,687.21	13,673,014.45
South Korea	- 34,553,053.34	71,477,424.78	- 20,455,436.44	- 54,692,998.71	- 58,764,588.42	- 44,883,389.67
Spain	- 3,674,533,329.99	- 3,233,419,477.23	- 1,531,691,767.34	- 1,407,346,710.30	- 1,040,190,880.78	- 279,436,428.35
Sweden	- 708,506,647.17	- 3,995,124,629.41	74,875,112.78	- 180,840,934.70	- 541,782,327.72	- 400,849,740.73
Switzerland	13,080,456,206.49	- 6,508,038,375.02	- 2,325,677,039.47	- 607,817,172.54	- 1,113,339,373.34	- 834,563,720.33
Turkey	- 6,722,708.24	- 51,529,127.53	8,324,982.66	- 4,870,901.70	12,798,067.33	- 1,859,149.92
UK	- 474,144,982.30	791,274,496.09	294,313,787.84	- 344,248,968.42	4,509,179,340.27	- 851,276,881.90
USA	17,715,081,076.63	89,380,937,814.91	- 871,139,384.27	2,953,037,542.29	2,670,296,499.60	- 6,029,305,617.73

Source: Own computations based on World Bank Data Base, Statistical Office of the Republic of Serbia, OECD Statistics, National Service of Republic of Armenia, Eurostat, Cekos in, World Development Indicators and The World Bank.

Appendix I

MIPEX: 2007 - 2009					
	Policy area: Labor market mobility				
	Labor Market Mobility	Access to labor markets	Access to general support	Targeted support	Workers' rights
Austria	43.75	50.00	50.00	0.00	75.00
Belgium	52.71	40.00	83.33	37.50	50.00
Canada	76.67	90.00	66.67	50.00	100.00
Cyprus	20.83	0.00	33.33	12.50	37.50
Czech Republic	54.79	90.00	66.67	12.50	50.00
Denmark	63.75	80.00	50.00	50.00	75.00
Estonia	65.21	40.00	83.33	62.50	75.00
Finland	71.04	80.00	66.67	62.50	75.00
France	48.75	20.00	50.00	62.50	62.50
Germany	76.88	70.00	50.00	87.50	100.00
Greece	44.58	20.00	83.33	0.00	75.00
Hungary	36.46	50.00	33.33	12.50	50.00
Ireland	42.29	40.00	16.67	25.00	87.50
Italy	68.96	80.00	83.33	25.00	87.50
Latvia	27.29	30.00	16.67	12.50	50.00
Lithuania	46.25	60.00	50.00	25.00	50.00
Luxembourg	44.58	20.00	83.33	0.00	75.00
Malta	48.13	80.00	50.00	12.50	50.00
Netherlands	85.42	100.00	66.67	75.00	100.00
Norway	76.25	80.00	50.00	75.00	100.00
Poland	45.42	40.00	66.67	12.50	62.50
Portugal	80.21	100.00	83.33	37.50	100.00
Slovakia	20.83	0.00	33.33	0.00	50.00
Slovenia	44.38	40.00	50.00	25.00	62.50

Spain	79.38	80.00	100.00	50.00	87.50
Sweden	100.00	100.00	100.00	100.00	100.00
Switzerland	52.50	60.00	50.00	37.50	62.50
UK	55.42	80.00	66.67	25.00	50.00

Source: Migrant Integration Policy Index 2007, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix J

MIPEX: 2010 - 2012					
	Policy area: Labor market mobility				
	Labor Market Mobility	Access to labor markets	Access to general support	Targeted support	Workers' rights
Armenia	51.25	80.00	50.00	12.50	62.50
Australia	58.13	70.00	50.00	50.00	62.50
Austria	56.25	50.00	50.00	50.00	75.00
Belgium	52.71	40.00	83.33	37.50	50.00
Bulgaria	40.42	70.00	16.67	25.00	50.00
Canada	80.83	90.00	83.33	50.00	100.00
Cyprus	20.83	0.00	33.33	12.50	37.50
Czech Republic	54.79	90.00	66.67	12.50	50.00
Denmark	73.13	80.00	50.00	87.50	75.00
Estonia	65.21	40.00	83.33	62.50	75.00
Finland	71.04	80.00	66.67	62.50	75.00
France	48.75	20.00	50.00	62.50	62.50
Germany	76.88	70.00	50.00	87.50	100.00
Greece	49.58	40.00	83.33	0.00	75.00
Hungary	41.46	70.00	33.33	12.50	50.00
Ireland	39.17	40.00	16.67	12.50	87.50
Italy	68.96	80.00	83.33	25.00	87.50
Japan	61.67	80.00	66.67	12.50	87.50
Latvia	35.63	30.00	50.00	12.50	50.00
Lithuania	46.25	60.00	50.00	25.00	50.00
Luxembourg	47.71	20.00	83.33	12.50	75.00
Malta	43.13	60.00	50.00	12.50	50.00
Netherlands	85.42	100.00	66.67	75.00	100.00
Norway	73.13	80.00	50.00	75.00	87.50

Poland	47.92	50.00	66.67	12.50	62.50
Portugal	93.75	100.00	100.00	75.00	100.00
Romania	67.71	50.00	83.33	37.50	100.00
Serbia	36.25	70.00	0.00	0.00	75.00
Slovakia	20.83	0.00	33.33	0.00	50.00
Slovenia	44.38	40.00	50.00	12.50	75.00
South Korea	81.04	70.00	66.67	87.50	100.00
Spain	84.38	100.00	100.00	50.00	87.50
Sweden	100.00	100.00	100.00	100.00	100.00
Switzerland	52.50	60.00	50.00	37.50	62.50
Turkey	10.42	0.00	16.67	12.50	12.50
UK	55.42	80.00	66.67	25.00	50.00
USA	67.71	100.00	83.33	25.00	62.50

Source: Migrant Integration Policy Index 2010, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix K

	MIPEX: 2007 - 2009				
	Policy area: Family reunion				
	Family reunion	Eligibility	Acquisition conditions	Security of status	Rights associated
Austria	43.33	40.00	33.33	50.00	50.00
Belgium	70.42	65.00	75.00	75.00	66.67
Canada	89.17	90.00	66.67	100.00	100.00
Cyprus	39.17	15.00	50.00	50.00	41.67
Czech Republic	66.46	70.00	66.67	62.50	66.67
Denmark	36.85	20.00	48.21	37.50	41.67
Estonia	64.79	55.00	75.00	62.50	66.67
Finland	69.79	75.00	83.33	62.50	58.33
France	52.80	35.00	38.69	62.50	75.00
Germany	62.11	55.00	64.29	62.50	66.67
Greece	47.08	30.00	50.00	50.00	58.33
Hungary	56.46	80.00	58.33	37.50	50.00
Ireland	35.83	35.00	58.33	25.00	25.00
Italy	77.71	65.00	66.67	87.50	91.67
Latvia	46.25	60.00	66.67	0.00	58.33
Lithuania	58.96	65.00	75.00	37.50	58.33
Luxembourg	53.33	55.00	58.33	75.00	25.00
Malta	50.21	30.00	50.00	62.50	58.33
Netherlands	59.32	45.00	42.26	50.00	100.00
Norway	72.08	80.00	54.17	62.50	91.67
Poland	67.08	60.00	58.33	75.00	75.00
Portugal	88.54	100.00	75.00	87.50	91.67
Slovakia	52.92	70.00	58.33	50.00	33.33
Slovenia	74.79	70.00	91.67	62.50	75.00
Spain	76.25	80.00	66.67	100.00	58.33

Sweden	88.54	100.00	75.00	87.50	91.67
Switzerland	39.79	30.00	25.00	62.50	41.67
UK	56.25	50.00	58.33	75.00	41.67

Source: Migrant Integration Policy Index 2007, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix L

	MIPEX: 2010 - 2012				
	Policy area: Family reunion				
	Family reunion	Eligibility	Acquisition conditions	Security of status	Rights associated
Armenia	76.25	80.00	91.67	50.00	83.33
Australia	80.83	90.00	58.33	75.00	100.00
Austria	40.83	30.00	33.33	50.00	50.00
Belgium	68.33	65.00	66.67	75.00	66.67
Bulgaria	51.25	30.00	75.00	50.00	50.00
Canada	89.17	90.00	66.67	100.00	100.00
Cyprus	39.17	15.00	50.00	50.00	41.67
Czech Republic	66.46	70.00	66.67	62.50	66.67
Denmark	36.99	20.00	36.31	50.00	41.67
Estonia	64.79	55.00	75.00	62.50	66.67
Finland	69.79	75.00	83.33	62.50	58.33
France	51.61	35.00	33.93	62.50	75.00
Germany	60.18	55.00	56.55	62.50	66.67
Greece	49.17	30.00	50.00	50.00	66.67
Hungary	60.63	80.00	75.00	37.50	50.00
Ireland	33.75	35.00	58.33	25.00	16.67
Italy	73.54	65.00	50.00	87.50	91.67
Japan	51.46	60.00	66.67	37.50	41.67
Latvia	46.25	60.00	66.67	0.00	58.33
Lithuania	58.96	65.00	75.00	37.50	58.33
Luxembourg	66.67	75.00	58.33	75.00	58.33
Malta	48.13	30.00	50.00	62.50	50.00
Netherlands	57.65	55.00	50.60	50.00	75.00
Norway	67.50	70.00	45.83	62.50	91.67
Poland	67.08	60.00	58.33	75.00	75.00

Portugal	90.63	100.00	83.33	87.50	91.67
Romania	64.58	75.00	75.00	50.00	58.33
Serbia	48.75	70.00	75.00	25.00	25.00
Slovakia	52.92	70.00	58.33	50.00	33.33
Slovenia	74.79	70.00	91.67	62.50	75.00
South Korea	59.79	60.00	66.67	62.50	50.00
Spain	84.58	80.00	83.33	100.00	75.00
Sweden	84.38	100.00	58.33	87.50	91.67
Switzerland	39.79	30.00	25.00	62.50	41.67
Turkey	54.79	65.00	66.67	62.50	25.00
UK	53.75	40.00	58.33	75.00	41.67
USA	66.67	50.00	58.33	75.00	83.33

Source: Migrant Integration Policy Index 2010, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix M

	MIPEX: 2007 - 2009				
	Policy area: Education*				
	Education	Access to education	Targeting needs	New opportunities	Intercultural education
Austria	N / A	N / A	N / A	N / A	N / A
Belgium	N / A	N / A	N / A	N / A	N / A
Canada	N / A	N / A	N / A	N / A	N / A
Cyprus	N / A	N / A	N / A	N / A	N / A
Czech Republic	N / A	N / A	N / A	N / A	N / A
Denmark	N / A	N / A	N / A	N / A	N / A
Estonia	N / A	N / A	N / A	N / A	N / A
Finland	N / A	N / A	N / A	N / A	N / A
France	N / A	N / A	N / A	N / A	N / A
Germany	N / A	N / A	N / A	N / A	N / A
Greece	N / A	N / A	N / A	N / A	N / A
Hungary	N / A	N / A	N / A	N / A	N / A
Ireland	N / A	N / A	N / A	N / A	N / A
Italy	N / A	N / A	N / A	N / A	N / A
Latvia	N / A	N / A	N / A	N / A	N / A
Lithuania	N / A	N / A	N / A	N / A	N / A
Luxembourg	N / A	N / A	N / A	N / A	N / A
Malta	N / A	N / A	N / A	N / A	N / A
Netherlands	N / A	N / A	N / A	N / A	N / A
Norway	N / A	N / A	N / A	N / A	N / A
Poland	N / A	N / A	N / A	N / A	N / A
Portugal	N / A	N / A	N / A	N / A	N / A
Slovakia	N / A	N / A	N / A	N / A	N / A
Slovenia	N / A	N / A	N / A	N / A	N / A
Spain	N / A	N / A	N / A	N / A	N / A

Sweden	N / A	N / A	N / A	N / A	N / A
Switzerland	N / A	N / A	N / A	N / A	N / A
UK	N / A	N / A	N / A	N / A	N / A

*Information about education policy indicators is not available for this period of time.
Source: Migrant Integration Policy Index 2007, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix N

	MIPEX: 2010 - 2012				
	Policy area: Education				
	Education	Access to education	Targeting needs	New opportunities	Intercultural education
Armenia	5.43	7.14	0.00	6.25	8.33
Australia	72.02	71.43	66.67	75.00	75.00
Austria	44.39	57.14	43.33	43.75	33.33
Belgium	65.71	67.86	70.00	62.50	62.50
Bulgaria	14.79	0.00	13.33	12.50	33.33
Canada	70.86	64.29	90.00	62.50	66.67
Cyprus	33.42	42.86	53.33	12.50	25.00
Czech Republic	44.23	28.57	56.67	50.00	41.67
Denmark	51.40	71.43	80.00	37.50	16.67
Estonia	50.42	50.00	60.00	50.00	41.67
Finland	63.50	78.57	90.00	43.75	41.67
France	28.85	50.00	13.33	18.75	33.33
Germany	43.21	42.86	30.00	50.00	50.00
Greece	42.19	50.00	33.33	43.75	41.67
Hungary	11.88	0.00	10.00	37.50	0.00
Ireland	24.64	28.57	36.67	0.00	33.33
Italy	40.60	35.71	60.00	25.00	41.67
Japan	19.46	42.86	26.67	0.00	8.33
Latvia	16.59	14.29	16.67	18.75	16.67
Lithuania	17.20	7.14	36.67	0.00	25.00
Luxembourg	51.70	64.29	46.67	37.50	58.33
Malta	16.19	21.43	10.00	0.00	33.33
Netherlands	50.74	57.14	50.00	12.50	83.33
Norway	62.98	28.57	90.00	50.00	83.33
Poland	28.75	50.00	23.33	25.00	16.67

Portugal	63.10	85.71	50.00	50.00	66.67
Romania	19.70	7.14	63.33	0.00	8.33
Serbia	17.26	35.71	0.00	0.00	33.33
Slovakia	23.57	14.29	30.00	0.00	50.00
Slovenia	24.33	28.57	16.67	18.75	33.33
South Korea	56.31	78.57	63.33	50.00	33.33
Spain	48.13	50.00	46.67	37.50	58.33
Sweden	77.41	57.14	90.00	87.50	75.00
Switzerland	44.55	35.71	46.67	62.50	33.33
Turkey	2.92	0.00	3.33	0.00	8.33
UK	57.72	57.14	63.33	18.75	91.67
USA	54.66	85.71	60.00	31.25	41.67

Source**:** Migrant Integration Policy Index 2010, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix O

	MIPEX: 2007 - 2009				
	Policy area: Political Participation				
	Political participation	Electoral rights	Political liberties	Consultative bodies	Implementation policies
Austria	32.50	0.00	100.00	0.00	30.00
Belgium	61.04	16.67	100.00	37.50	90.00
Canada	37.50	0.00	100.00	0.00	50.00
Cyprus	25.00	0.00	100.00	0.00	0.00
Czech Republic	12.50	0.00	50.00	0.00	0.00
Denmark	66.25	100.00	100.00	65.00	0.00
Estonia	28.13	25.00	50.00	0.00	37.50
Finland	86.88	100.00	100.00	67.50	80.00
France	43.54	0.00	66.67	27.50	80.00
Germany	64.38	0.00	100.00	67.50	90.00
Greece	25.00	0.00	100.00	0.00	0.00
Hungary	33.33	33.33	100.00	0.00	0.00
Ireland	78.75	100.00	100.00	25.00	90.00
Italy	49.79	0.00	66.67	52.50	80.00
Latvia	17.50	0.00	50.00	0.00	20.00
Lithuania	25.00	50.00	50.00	0.00	0.00
Luxembourg	76.04	50.00	100.00	66.67	87.50
Malta	25.00	0.00	100.00	0.00	0.00
Netherlands	79.38	100.00	100.00	30.00	87.50
Norway	93.75	100.00	100.00	85.00	90.00
Poland	12.50	0.00	50.00	0.00	0.00
Portugal	68.96	33.33	100.00	42.50	100.00
Slovakia	20.83	50.00	33.33	0.00	0.00
Slovenia	27.92	25.00	66.67	0.00	20.00
Spain	55.83	33.33	100.00	50.00	40.00

Sweden	75.00	100.00	100.00	0.00	100.00
Switzerland	58.13	50.00	100.00	32.50	50.00
UK	52.50	50.00	100.00	0.00	60.00

Source: Migrant Integration Policy Index 2007, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix P

	MIPEX: 2010 - 2012				
	Policy area: Political Participation				
	Political participation	Electoral rights	Political liberties	Consultative bodies	Implementation policies
Armenia	41.67	100.00	66.67	0.00	0.00
Australia	59.17	16.67	100.00	30.00	90.00
Austria	32.50	0.00	100.00	0.00	30.00
Belgium	58.54	16.67	100.00	27.50	90.00
Bulgaria	16.67	0.00	66.67	0.00	0.00
Canada	37.50	0.00	100.00	0.00	50.00
Cyprus	25.00	0.00	100.00	0.00	0.00
Czech Republic	12.50	0.00	50.00	0.00	0.00
Denmark	61.88	100.00	100.00	47.50	0.00
Estonia	28.13	25.00	50.00	0.00	37.50
Finland	86.88	100.00	100.00	67.50	80.00
France	43.54	0.00	66.67	27.50	80.00
Germany	64.38	0.00	100.00	67.50	90.00
Greece	39.58	33.33	100.00	15.00	10.00
Hungary	33.33	33.33	100.00	0.00	0.00
Ireland	78.75	100.00	100.00	25.00	90.00
Italy	49.79	0.00	66.67	52.50	80.00
Japan	27.08	0.00	83.33	25.00	0.00
Latvia	17.50	0.00	50.00	0.00	20.00
Lithuania	25.00	50.00	50.00	0.00	0.00
Luxembourg	77.71	50.00	100.00	73.33	87.50
Malta	25.00	0.00	100.00	0.00	0.00
Netherlands	79.38	100.00	100.00	30.00	87.50
Norway	93.75	100.00	100.00	85.00	90.00
Poland	12.50	0.00	50.00	0.00	0.00

Portugal	70.21	33.33	100.00	47.50	100.00
Romania	8.33	0.00	33.33	0.00	0.00
Serbia	12.50	0.00	50.00	0.00	0.00
Slovakia	20.83	50.00	33.33	0.00	0.00
Slovenia	27.92	25.00	66.67	0.00	20.00
South Korea	60.00	66.67	33.33	40.00	100.00
Spain	55.83	33.33	100.00	50.00	40.00
Sweden	75.00	100.00	100.00	0.00	100.00
Switzerland	58.75	50.00	100.00	35.00	50.00
Turkey	12.71	0.00	33.33	7.50	10.00
UK	52.50	50.00	100.00	0.00	60.00
USA	45.42	16.67	100.00	15.00	50.00

Source: Migrant Integration Policy Index 2010, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix Q

	MIPEX: 2007 - 2009				
	Policy area: Long term residence				
	Long term residence	Eligibility	Acquisition conditions	Security of status	Associated rights
Austria	54.17	41.67	37.50	50.00	87.50
Belgium	64.14	8.33	62.50	85.71	100.00
Canada	59.75	66.67	34.82	50.00	87.50
Cyprus	40.63	25.00	37.50	50.00	50.00
Czech Republic	65.18	50.00	75.00	35.71	100.00
Denmark	63.91	83.33	34.82	50.00	87.50
Estonia	68.30	50.00	58.93	64.29	100.00
Finland	58.48	25.00	50.00	71.43	87.50
France	45.61	8.33	45.54	78.57	50.00
Germany	50.30	33.33	8.93	71.43	87.50
Greece	56.10	58.33	21.43	57.14	87.50
Hungary	53.72	41.67	50.00	35.71	87.50
Ireland	42.56	41.67	50.00	28.57	50.00
Italy	69.20	25.00	87.50	64.29	100.00
Latvia	50.52	33.33	40.18	28.57	100.00
Lithuania	56.70	50.00	46.43	42.86	87.50
Luxembourg	56.85	66.67	75.00	35.71	50.00
Malta	64.29	50.00	50.00	57.14	100.00
Netherlands	67.93	58.33	47.32	78.57	87.50
Norway	61.09	41.67	43.75	71.43	87.50
Poland	65.33	41.67	75.00	57.14	87.50
Portugal	55.21	33.33	50.00	50.00	87.50
Slovakia	50.22	50.00	40.18	35.71	75.00
Slovenia	68.90	41.67	75.00	71.43	87.50
Spain	71.58	41.67	87.50	57.14	100.00

Sweden	77.68	75.00	50.00	85.71	100.00
Switzerland	41.37	8.33	12.50	57.14	87.50
UK	74.11	75.00	62.50	71.43	87.50

Source: Migrant Integration Policy Index 2007, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix R

MIPEX: 2010 - 2012					
	Policy area: Long term residence				
	Long term residence	Eligibility	Acquisition conditions	Security of status	Associated rights
Armenia	64.58	33.33	100.00	50.00	75.00
Australia	60.79	83.33	33.04	64.29	62.50
Austria	58.33	58.33	37.50	50.00	87.50
Belgium	78.72	41.67	87.50	85.71	100.00
Bulgaria	56.85	41.67	62.50	35.71	87.50
Canada	62.87	66.67	34.82	50.00	100.00
Cyprus	36.83	25.00	22.32	50.00	50.00
Czech Republic	64.73	50.00	73.21	35.71	100.00
Denmark	65.85	100.00	33.04	42.86	87.50
Estonia	66.52	50.00	58.93	57.14	100.00
Finland	58.48	25.00	50.00	71.43	87.50
France	45.61	8.33	45.54	78.57	50.00
Germany	50.07	33.33	8.04	71.43	87.50
Greece	56.32	58.33	22.32	57.14	87.50
Hungary	59.97	41.67	75.00	35.71	87.50
Ireland	42.56	41.67	50.00	28.57	50.00
Italy	65.63	25.00	73.21	64.29	100.00
Japan	58.04	50.00	37.50	57.14	87.50
Latvia	58.85	66.67	40.18	28.57	100.00
Lithuania	56.70	50.00	46.43	42.86	87.50
Luxembourg	55.80	25.00	75.00	35.71	87.50
Malta	64.29	50.00	50.00	57.14	100.00
Netherlands	67.93	58.33	47.32	78.57	87.50
Norway	61.09	41.67	43.75	71.43	87.50
Poland	65.33	41.67	75.00	57.14	87.50

Portugal	68.53	50.00	52.68	71.43	100.00
Romania	54.17	41.67	44.64	42.86	87.50
Serbia	51.34	50.00	62.50	42.86	50.00
Slovakia	50.22	50.00	40.18	35.71	75.00
Slovenia	68.90	41.67	75.00	71.43	87.50
South Korea	62.20	41.67	50.00	57.14	100.00
Spain	77.53	58.33	87.50	64.29	100.00
Sweden	77.68	75.00	50.00	85.71	100.00
Switzerland	41.37	8.33	12.50	57.14	87.50
Turkey	32.74	41.67	37.50	14.29	37.50
UK	31.47	0.00	16.96	21.43	87.50
USA	49.55	50.00	50.00	35.71	62.50

Source: Migrant Integration Policy Index 2010, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix S

	MIPEX: 2007 - 2009				
	Policy area: Nationality				
	Access to nationality	Eligibility	Acquisition conditions	Security status	Dual nationality
Austria	21.61	20.00	27.14	14.29	25.00
Belgium	68.57	60.00	71.43	42.86	100.00
Canada	74.46	95.00	67.14	35.71	100.00
Cyprus	31.96	35.00	35.71	7.14	50.00
Czech Republic	33.39	0.00	51.43	57.14	25.00
Denmark	33.10	40.00	24.52	42.86	25.00
Estonia	15.24	10.00	29.52	21.43	0.00
Finland	54.29	55.00	47.86	64.29	50.00
France	58.99	75.00	25.24	35.71	100.00
Germany	52.02	90.00	18.10	50.00	50.00
Greece	18.27	5.00	18.10	0.00	50.00
Hungary	27.86	0.00	40.00	21.43	50.00
Ireland	60.00	90.00	35.71	14.29	100.00
Italy	64.64	30.00	57.14	71.43	100.00
Latvia	15.89	0.00	38.57	0.00	25.00
Lithuania	19.82	20.00	52.14	7.14	0.00
Luxembourg	34.29	40.00	82.86	14.29	0.00
Malta	25.54	15.00	30.00	7.14	50.00
Netherlands	65.12	75.00	46.19	64.29	75.00
Norway	40.71	20.00	67.86	50.00	25.00
Poland	35.00	15.00	57.14	42.86	25.00
Portugal	81.96	90.00	80.71	57.14	100.00
Slovakia	38.57	10.00	44.29	50.00	50.00
Slovenia	32.68	10.00	67.14	28.57	25.00
Spain	38.63	40.00	25.24	64.29	25.00

Sweden	79.29	60.00	71.43	85.71	100.00
Switzerland	35.54	35.00	0.00	57.14	50.00
UK	75.24	100.00	58.10	42.86	100.00

Source: Migrant Integration Policy Index 2007, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix T

MIPEX: 2010 - 2012					
	Policy area: Nationality				
	Access to nationality	Eligibility	Acquisition conditions	Security status	Dual nationality
Armenia	41.31	40.00	53.81	21.43	50.00
Australia	77.44	95.00	57.62	57.14	100.00
Austria	21.61	20.00	27.14	14.29	25.00
Belgium	68.57	60.00	71.43	42.86	100.00
Bulgaria	23.93	0.00	67.14	28.57	0.00
Canada	74.46	95.00	67.14	35.71	100.00
Cyprus	31.96	35.00	35.71	7.14	50.00
Czech Republic	33.39	0.00	51.43	57.14	25.00
Denmark	33.10	40.00	24.52	42.86	25.00
Estonia	15.54	10.00	30.71	21.43	0.00
Finland	56.79	65.00	47.86	64.29	50.00
France	58.99	75.00	25.24	35.71	100.00
Germany	59.23	90.00	32.62	64.29	50.00
Greece	56.79	75.00	45.00	7.14	100.00
Hungary	31.43	0.00	40.00	35.71	50.00
Ireland	58.21	90.00	28.57	14.29	100.00
Italy	62.86	30.00	50.00	71.43	100.00
Japan	32.86	40.00	41.43	50.00	0.00
Latvia	15.42	0.00	36.67	0.00	25.00
Lithuania	19.82	20.00	52.14	7.14	0.00
Luxembourg	74.05	70.00	69.05	57.14	100.00
Malta	25.54	15.00	30.00	7.14	50.00
Netherlands	65.60	75.00	48.10	64.29	75.00
Norway	40.71	20.00	67.86	50.00	25.00
Poland	35.00	15.00	57.14	42.86	25.00

Portugal	81.96	90.00	80.71	57.14	100.00
Romania	29.11	25.00	12.86	28.57	50.00
Serbia	47.86	20.00	71.43	50.00	50.00
Slovakia	26.67	10.00	25.24	21.43	50.00
Slovenia	32.68	10.00	67.14	28.57	25.00
South Korea	44.76	30.00	38.33	35.71	75.00
Spain	38.63	40.00	25.24	64.29	25.00
Sweden	79.29	60.00	71.43	85.71	100.00
Switzerland	35.54	35.00	0.00	57.14	50.00
Turkey	32.38	40.00	25.24	14.29	50.00
UK	59.35	65.00	29.52	42.86	100.00
USA	61.13	80.00	35.95	28.57	100.00

Source: Migrant Integration Policy Index 2010, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix U

MIPEX: 2007 - 2009					
	Policy area: Discrimination				
	Anti-discrimination	Definitions and concepts	Field of application	Enforcement mechanisms	Equality policies
Austria	39.98	57.14	8.33	50.00	44.44
Belgium	69.54	64.29	83.33	75.00	55.56
Canada	89.24	100.00	100.00	62.50	94.44
Cyprus	59.33	42.86	100.00	50.00	44.44
Czech Republic	20.09	42.86	8.33	29.17	0.00
Denmark	41.67	50.00	50.00	50.00	16.67
Estonia	18.15	14.29	8.33	33.33	16.67
Finland	76.59	78.57	100.00	66.67	61.11
France	74.45	71.43	100.00	70.83	55.56
Germany	47.92	50.00	75.00	50.00	16.67
Greece	49.65	50.00	50.00	54.17	44.44
Hungary	75.35	50.00	100.00	79.17	72.22
Ireland	54.51	50.00	66.67	45.83	55.56
Italy	61.56	64.29	100.00	70.83	11.11
Latvia	24.85	28.57	8.33	29.17	33.33
Lithuania	49.50	78.57	33.33	25.00	61.11
Luxembourg	46.53	50.00	50.00	58.33	27.78
Malta	27.03	42.86	8.33	45.83	11.11
Netherlands	67.51	71.43	66.67	87.50	44.44
Norway	59.42	57.14	50.00	58.33	72.22
Poland	34.72	50.00	16.67	50.00	22.22
Portugal	83.78	64.29	100.00	87.50	83.33
Slovakia	47.32	64.29	25.00	66.67	33.33
Slovenia	66.42	64.29	100.00	62.50	38.89

Spain	48.66	57.14	50.00	54.17	33.33
Sweden	87.70	78.57	100.00	83.33	88.89
Switzerland	30.61	57.14	0.00	37.50	27.78
UK	81.50	85.71	100.00	62.50	77.78

Source: Migrant Integration Policy Index 2007, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix V

MIPEX: 2010 - 2012					
	Policy area: Discrimination				
	Anti-discrimination	Definitions and concepts	Field of application	Enforcement mechanisms	Equality policies
Armenia	26.04	50.00	8.33	45.83	0.00
Australia	68.80	57.14	58.33	87.50	72.22
Austria	33.04	57.14	8.33	50.00	16.67
Belgium	78.67	78.57	100.00	75.00	61.11
Bulgaria	79.66	71.43	100.00	75.00	72.22
Canada	89.24	100.00	100.00	62.50	94.44
Cyprus	59.33	42.86	100.00	50.00	44.44
Czech Republic	44.49	57.14	50.00	54.17	16.67
Denmark	46.53	50.00	50.00	58.33	27.78
Estonia	31.55	42.86	8.33	41.67	33.33
Finland	77.98	78.57	100.00	66.67	66.67
France	76.98	85.71	100.00	66.67	55.56
Germany	47.92	50.00	75.00	50.00	16.67
Greece	49.65	50.00	50.00	54.17	44.44
Hungary	75.35	50.00	100.00	79.17	72.22
Ireland	62.85	50.00	100.00	45.83	55.56
Italy	61.56	64.29	100.00	70.83	11.11
Japan	13.64	14.29	0.00	29.17	11.11
Latvia	24.85	28.57	8.33	29.17	33.33
Lithuania	54.71	78.57	33.33	45.83	61.11
Luxembourg	47.57	50.00	50.00	62.50	27.78
Malta	36.16	57.14	8.33	62.50	16.67
Netherlands	67.51	71.43	66.67	87.50	44.44
Norway	59.42	57.14	50.00	58.33	72.22

Poland	35.76	50.00	16.67	54.17	22.22
Portugal	83.78	64.29	100.00	87.50	83.33
Romania	72.62	57.14	100.00	83.33	50.00
Serbia	76.29	85.71	100.00	75.00	44.44
Slovakia	58.83	71.43	50.00	75.00	38.89
Slovenia	66.42	64.29	100.00	62.50	38.89
South Korea	53.67	28.57	100.00	41.67	44.44
Spain	48.66	57.14	50.00	54.17	33.33
Sweden	87.70	78.57	100.00	83.33	88.89
Switzerland	30.61	57.14	0.00	37.50	27.78
Turkey	24.26	42.86	16.67	20.83	16.67
UK	86.11	100.00	100.00	66.67	77.78
USA	88.54	100.00	100.00	87.50	66.67

Source: Migrant Integration Policy Index 2010, Migrant Integration Policy Index. Available at www.mipex.eu

Appendix W

Observation	Country	Year	IS	ALM	SLR	AN
1	Armenia	2010	-0.0029550	80	50	41
2	Armenia	2011	-0.0007398	80	50	41
3	Armenia	2012	-0.0007308	80	50	41
4	Australia	2010	-0.0093763	70	64	77
5	Australia	2011	-0.0075728	70	64	77
6	Australia	2012	-0.0076300	70	64	77
7	Austria	2007	-0.0046898	50	50	22
8	Austria	2008	-0.0023719	50	50	22
9	Austria	2009	-0.0044060	50	50	22
10	Austria	2010	-0.0001411	50	50	22
11	Austria	2011	-0.0035632	50	50	22
12	Austria	2012	-0.0020183	50	50	22
13	Belgium	2007	-0.0017058	40	86	69
14	Belgium	2008	-0.0003545	40	86	69
15	Belgium	2009	-0.0013039	40	86	69
16	Belgium	2010	-0.0061812	40	86	69
17	Belgium	2011	0.0002437	40	86	69
18	Belgium	2012	-0.0002365	40	86	69
19	Bulgaria	2010	0.0000542	70	36	24
20	Bulgaria	2011	0.0000140	70	36	24
21	Bulgaria	2012	-0.0000016	70	36	24
22	Canada	2007	-0.0104227	90	50	74
23	Canada	2008	-0.0173557	90	50	74
24	Canada	2009	-0.0091817	90	50	74
25	Canada	2010	-0.0484483	90	50	74
26	Canada	2011	-0.0112087	90	50	74
27	Canada	2012	-0.0064283	90	50	74
28	Cyprus	2007	-0.0025342	0	50	32
29	Cyprus	2008	-0.0012548	0	50	32
30	Cyprus	2009	-0.0023022	0	50	32
31	Cyprus	2010	-0.0042280	0	50	32
32	Cyprus	2011	-0.0005296	0	50	32
33	Cyprus	2012	-0.0042107	0	50	32
34	Czech republic	2007	-0.0000109	90	36	33
35	Czech republic	2008	-0.0000140	90	36	33
36	Czech republic	2009	0.0001484	90	36	33
37	Czech republic	2010	0.0000213	90	36	33
38	Czech republic	2011	0.0000550	90	36	33
39	Czech republic	2012	-0.0003859	90	36	33

40	Denmark	2007	-0.0000062	80	50	33
41	Denmark	2008	-0.0006339	80	50	33
42	Denmark	2009	0.0004655	80	50	33
43	Denmark	2010	0.0006541	80	43	33
44	Denmark	2011	0.0000235	80	43	33
45	Denmark	2012	0.0005312	80	43	33
46	Estonia	2007	-0.0000924	40	64	15
47	Estonia	2008	-0.0006804	40	64	15
48	Estonia	2009	0.0034247	40	64	15
49	Estonia	2010	0.0047055	40	57	16
50	Estonia	2011	-0.0020576	40	57	16
51	Estonia	2012	0.0005016	40	57	16
52	Finland	2007	-0.0000542	80	71	54
53	Finland	2008	-0.0000782	80	71	54
54	Finland	2009	0.0002237	80	71	54
55	Finland	2010	0.0000540	80	71	57
56	Finland	2011	-0.0000756	80	71	57
57	Finland	2012	-0.0001407	80	71	57
58	France	2007	-0.0007741	20	79	59
59	France	2008	-0.0006832	20	79	59
60	France	2009	-0.0021623	20	79	59
61	France	2010	-0.0007369	20	79	59
62	France	2011	-0.0002193	20	79	59
63	France	2012	-0.0020867	20	79	59
64	Germany	2007	-0.0013338	70	71	52
65	Germany	2008	-0.0004521	70	71	52
66	Germany	2009	0.0008167	70	71	52
67	Germany	2010	-0.0000334	70	71	59
68	Germany	2011	-0.0018221	70	71	59
69	Germany	2012	-0.0005061	70	71	59
70	Greece	2007	-0.0000596	70	71	18
71	Greece	2008	-0.0008935	70	71	18
72	Greece	2009	-0.0003362	70	71	18
73	Greece	2010	-0.0000967	40	57	57
74	Greece	2011	-0.0001618	40	57	57
75	Greece	2012	0.0000432	40	57	57
76	Hungary	2007	0.0000074	50	36	28
77	Hungary	2008	0.0000243	50	36	28
78	Hungary	2009	0.0000006	50	36	28
79	Hungary	2010	-0.0002262	70	36	31
80	Hungary	2011	-0.0000697	70	36	31
81	Hungary	2012	0.0000981	70	36	31
82	Ireland	2007	-0.0047601	40	29	60

83	Ireland	2008	-0.0010238	40	29	60
84	Ireland	2009	-0.0053928	40	29	60
85	Ireland	2010	0.0095779	40	29	58
86	Ireland	2011	-0.0080488	40	29	58
87	Ireland	2012	-0.0019363	40	29	58
88	Italy	2007	-0.0001393	80	64	65
89	Italy	2008	-0.0003882	80	64	65
90	Italy	2009	0.0003949	80	64	65
91	Italy	2010	0.0000631	80	64	63
92	Italy	2011	-0.0001050	80	64	63
93	Italy	2012	-0.0041775	80	64	63
94	Japan	2010	-0.0000013	80	57	33
95	Japan	2011	0.0000201	80	57	33
96	Japan	2012	0.0000035	80	57	33
97	Latvia	2007	-0.0005028	30	29	16
98	Latvia	2008	-0.0007002	30	29	16
99	Latvia	2009	0.0094960	30	29	16
100	Latvia	2010	-0.0329620	30	29	15
101	Latvia	2011	0.0147080	30	29	15
102	Latvia	2012	-0.0005597	30	29	15
103	Lithuania	2007	-0.0000236	60	43	20
104	Lithuania	2008	-0.0000254	60	43	20
105	Lithuania	2009	0.0001410	60	43	20
106	Lithuania	2010	-0.0001566	60	43	20
107	Lithuania	2011	0.0010657	60	43	20
108	Lithuania	2012	0.0000272	60	43	20
109	Luxembourg	2007	-0.0091834	20	36	34
110	Luxembourg	2008	-0.0448502	20	36	34
111	Luxembourg	2009	-0.0810221	20	36	34
112	Luxembourg	2010	-0.0182896	20	36	74
113	Luxembourg	2011	-0.0348876	20	36	74
114	Luxembourg	2012	-0.0380421	20	36	74
115	Malta	2007	-0.0002291	80	57	26
116	Malta	2008	-0.0000468	80	57	26
117	Malta	2009	-0.0001435	80	57	26
118	Malta	2010	-0.0001428	60	57	26
119	Malta	2011	-0.0000632	60	57	26
120	Malta	2012	-0.0002452	60	57	26
121	Netherlands	2007	-0.0001047	100	79	65
122	Netherlands	2008	-0.0003959	100	79	65
123	Netherlands	2009	-0.0009295	100	79	65
124	Netherlands	2010	-0.0011025	100	79	66
125	Netherlands	2011	-0.0015970	100	79	66

126	Netherlands	2012	-0.0007758	100	79	66
127	Norway	2007	-0.0007431	80	71	41
128	Norway	2008	-0.0026598	80	71	41
129	Norway	2009	0.0000808	80	71	41
130	Norway	2010	-0.0000853	80	71	41
131	Norway	2011	-0.0003373	80	71	41
132	Norway	2012	-0.0004540	80	71	41
133	Poland	2007	0.0000001	40	57	35
134	Poland	2008	-0.0000182	40	57	35
135	Poland	2009	0.0000127	40	57	35
136	Poland	2010	-0.0000160	50	57	35
137	Poland	2011	-0.0000494	50	57	35
138	Poland	2012	-0.0000854	50	57	35
139	Portugal	2007	-0.0001399	100	50	82
140	Portugal	2008	-0.0000410	100	50	82
141	Portugal	2009	0.0006098	100	50	82
142	Portugal	2010	-0.0002703	100	71	82
143	Portugal	2011	0.0026425	100	71	82
144	Portugal	2012	-0.0003601	100	71	82
145	Romania	2010	-0.0000004	50	43	29
146	Romania	2011	0.0000011	50	43	29
147	Romania	2012	0.0000011	50	43	29
148	Serbia	2010	0.0022086	70	43	48
149	Serbia	2011	0.0009361	70	43	48
150	Serbia	2012	0.0001926	70	43	48
151	Slovakia	2007	-0.0000003	0	36	39
152	Slovakia	2008	-0.0000211	0	36	39
153	Slovakia	2009	0.0000087	0	36	39
154	Slovakia	2010	-0.0000279	0	36	27
155	Slovakia	2011	0.0000194	0	36	27
156	Slovakia	2012	-0.0000563	0	36	27
157	Slovenia	2007	-0.0005210	40	71	33
158	Slovenia	2008	0.0000993	40	71	33
159	Slovenia	2009	-0.0011007	40	71	33
160	Slovenia	2010	-0.0000220	40	71	33
161	Slovenia	2011	0.0050025	40	71	33
162	Slovenia	2012	0.0003020	40	71	33
163	South Korea	2010	-0.0000539	70	57	45
164	South Korea	2011	-0.0000527	70	57	45
165	South Korea	2012	-0.0000397	70	57	45
166	Spain	2007	-0.0025492	80	57	39
167	Spain	2008	-0.0020292	80	57	39
168	Spain	2009	-0.0010532	80	57	39

169	Spain	2010	-0.0010229	100	64	39
170	Spain	2011	-0.0007158	100	64	39
171	Spain	2012	-0.0002112	100	64	39
172	Sweden	2007	-0.0015319	100	86	79
173	Sweden	2008	-0.0082177	100	86	79
174	Sweden	2009	0.0001845	100	86	79
175	Sweden	2010	-0.0003907	100	86	79
176	Sweden	2011	-0.0010102	100	86	79
177	Sweden	2012	-0.0007653	100	86	79
178	Switzerland	2007	0.0290336	60	57	36
179	Switzerland	2008	-0.0124131	60	57	36
180	Switzerland	2009	-0.0045649	60	57	36
181	Switzerland	2010	-0.0011038	60	57	36
182	Switzerland	2011	-0.0016935	60	57	36
183	Switzerland	2012	-0.0013222	60	57	36
184	Turkey	2010	-0.0000067	0	14	32
185	Turkey	2011	0.0000165	0	14	32
186	Turkey	2012	-0.0000024	0	14	32
187	United Kingdom	2007	-0.0001660	80	71	75
188	United Kingdom	2008	0.0002944	80	71	75
189	United Kingdom	2009	0.0001333	80	71	75
190	United Kingdom	2010	-0.0001506	80	21	59
191	United Kingdom	2011	0.0018190	80	21	59
192	United Kingdom	2012	-0.0003444	80	21	59
193	United States	2010	0.0001974	100	36	61
194	United States	2011	0.0001719	100	36	61
195	United States	2012	-0.0003712	100	36	61

Source: Own computations based on World Bank Data Base, Statistical Office of the Republic of Serbia, OECD Statistics, National Service of Republic of Armenia, Eurostat, Cekos in, World Development Indicators and The World Bank and Migrant Integration Policy Index.

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